

TABLES

TABLE 6 - SOIL ANALYTICAL DATA RELATIVE TO COMPARISON CRITERIA(1)

Chemicals of Interest Comparison Criteria(2)

SAMPLE DESIGNATION(3)

T-15-F T-21-F NC-0-0.3 T-2WEST

T-6FLOOR

T-6EAST

T-6SOUTH

T-6NORTH

SC-W SC-E

VOCs

1,1,1,2-Tetrachloroethane 7.60 <0.00507 <0.00542 <0.00672 <0.026 <0.015
 <1.39 <1.36 <0.00577 <0.00586 <0.00722

1,1,1-Trichloroethane 1400.00 <0.011 <0.012 0.213J <0.058 <0.033 <3.06
 <2.99 0.087J <0.013 <0.016

1,1,2,2-Tetrachloroethane 0.97 <0.013 <0.014 <0.018 <0.069 <0.039 <3.66
 <3.57 <0.015 <0.015 <0.019

1,1,2-Trichloroethane 2.10 <0.011 <0.012 <0.015 <0.059 <0.033 <3.12 <3.04
 <0.013 <0.013 <0.016

1,1-Dichloroethane 2300.00 <0.016 <0.017 <0.021 <0.084 <0.047 <4.40 <4.30
 <0.018 <0.019 <0.023

1,1-Dichloroethene 470.00 <0.032 <0.034 <0.043 <0.168 <0.095 <8.84 <8.63
 <0.037 <0.037 <0.046

1,1-Dichloropropene 60.91 <0.010 <0.011 <0.013 <0.052 <0.029 <2.76 <2.69
 <0.011 <0.012 <0.014

1,2,3-Trichloropropane 0.0034 <0.017 <0.018 <0.022 <0.087 <0.049 <4.60
 <4.49 <0.019 <0.019 <0.024

1,2,4-Trichlorobenzene 260.00 <0.015 <0.016 <0.020 <0.077 <0.043 <4.04
 <3.95 <0.017 <0.017 <0.021

1,2,4-Trimethylbenzene 190.00 <0.014 0.59J 0.123J <0.075 <0.042 <3.95
 <3.86 0.230J 0.111J 0.074J

1,2-Dibromo-3-chloropropane 2.20 <0.039 <0.041 <0.051 <0.202 <0.114 <10.6
 <10.4 <0.044 <0.045 <0.055

1,2-Dibromoethane 0.07 <0.012 <0.012 <0.015 <0.060 <0.034 <3.17 <3.09
 <0.013 <0.013 <0.016

1,2-Dichlorobenzene 370.00 <0.016 <0.017 <0.021 <0.082 <0.046 <4.31 <4.21
 <0.018 <0.018 <0.022

1,2-Dichloroethane 0.84 <0.00633 <0.00676 0.603 <0.033 <0.019 <1.74 <1.70
 <0.00720 <0.00731 <0.00901

1,2-Dichloropropane 0.85 <0.00522 <0.00558 <0.00691 <0.027 <0.015 <1.43
 <1.40 <0.00593 <0.00603 <0.00743

1,3,5-Trimethylbenzene 78.00 <0.012 <0.012 0.110J <0.061 <0.034 <3.20
 <3.12 0.094J 0.057J <0.017

1,3-Dichlorobenzene 88.17 <0.015 <0.016 <0.020 <0.080 <0.045 <4.23 <4.13
 <0.018 <0.018 <0.022

1,3-Dichloropropane 60.91 <0.00865 <0.00924 <0.011 <0.045 <0.025 <2.37
 <2.32 <0.00983 <0.00999 <0.012

1,4-Dichlorobenzene 8.10 <0.020 <0.021 <0.026 <0.103 <0.058 <5.45 <5.32
 <0.023 <0.023 <0.028

2,2-Dichloropropane 44.19 <0.056 <0.060 <0.074 <0.292 <0.164 <15.4 <15.0
 <0.064 <0.065 <0.080

2-Butanone 34000.00 <0.029 <0.031 <0.039 <0.152 <0.085 <7.99 <7.80 <0.033
 <0.034 <0.041

2-Chloroethylvinyl ether 3.31 <0.011 <0.012 <0.015 <0.059 <0.033 <3.10
 <3.03 <0.013 <0.013 <0.016

2-Chlorotoluene 510.00 <0.013 <0.014 <0.017 <0.066 <0.037 <3.50 <3.42
 <0.015 <0.015 <0.018

2-Hexanone 79.20 <0.016 <0.018 <0.022 <0.085 <0.048 <4.49 <4.39 <0.019
<0.019 <0.023
4-Chlorotoluene 3.46 <0.015 <0.016 <0.020 <0.077 <0.043 <4.06 <3.96
<0.017 <0.017 <0.021
4-Isopropyltoluene 4713.42 <0.013 <0.014 <0.017 <0.067 <0.038 <3.53 <3.44
<0.015 <0.015 <0.018
4-Methyl-2-pentanone 17000.00 <0.016 <0.018 <0.022 <0.086 <0.048 <4.52
<4.41 <0.019 <0.019 <0.023
Acetone 8114.02 <0.051 <0.055 <0.068 <0.267 <0.150 <14.1 <13.7 <0.058
<0.059 <0.073
Acrolein 0.38 <0.097 <0.103 <0.128 <0.504 <0.283 <26.5 <25.9 <0.110
<0.112 <0.138
Acrylonitrile 0.55 <0.052 <0.055 <0.069 <0.269 <0.152 <14.2 <13.8 <0.059
<0.060 <0.074
Benzene 1.60 <0.00662 <0.00707 0.217J <0.034 1.33 18.2J 13.8J 2.94 0.102J
<0.00942
Bromobenzene 120.00 <0.015 <0.016 <0.019 <0.076 <0.043 <3.99 <3.90 <0.017
<0.017 <0.021
Bromodichloromethane 2.60 <0.00724 <0.00775 <0.00960 <0.038 <0.021 <1.99
<1.94 <0.00824 <0.00838 <0.010
Bromoform 240.00 <0.011 <0.012 <0.015 <0.058 <0.033 <3.06 <2.99 <0.013
<0.013 <0.016
Bromomethane 15.00 <0.071 <0.075 <0.093 <0.368 <0.207 <19.4 <18.9 <0.080
<0.082 <0.100
Butanol 3075.73 <0.884 <0.945 <1.17 <4.61 <2.59 <243 <237 <1.01 <1.02
<1.26
Carbon disulfide 720.00 <0.022 <0.024 <0.030 <0.117 <0.066 <6.17 <6.02
<0.026 <0.026 <0.032
Carbon tetrachloride 0.58 <0.011 <0.012 <0.015 <0.059 <0.033 <3.13 <3.05
<0.013 <0.013 <0.016
Chlorobenzene 600.00 <0.00908 <0.00971 <0.012 <0.047 <0.027 <2.49 <2.43
<0.010 <0.010 <0.013
Chloroethane 7.20 <0.032 <0.034 <0.042 <0.166 <0.093 <8.74 <8.53 <0.036
<0.037 <0.045
Chloroform 0.58 0.638 0.286 0.545 <0.062 <0.035 <3.26 18.4J 0.293 <0.014
<0.017
Chloromethane 3.00 <0.037 <0.039 <0.048 <0.191 <0.107 <10.0 <9.80 <0.042
<0.042 <0.052
cis-1,2-Dichloroethene 160.00 0.198J 0.250J <0.011 <0.043 <0.024 <2.28
<2.23 <0.00945 <0.00960 0.012
cis-1,3-Dichloropropene 42.94 <0.00700 <0.00749 <0.00928 <0.037 <0.021
<1.92 <1.88 <0.00796 <0.00810 <0.00997
Cyclohexane 6800.00 <0.00850 0.108J 0.183J <0.044 <0.025 <2.33 <2.28
0.063J 0.208J 0.106J
Dibromochloromethane 2.60 <0.00676 <0.00723 <0.00896 <0.035 <0.020 <1.86
<1.81 <0.00769 <0.00782 <0.00963
Dibromomethane 194.29 <0.015 <0.016 <0.020 <0.079 <0.044 <4.16 <4.06
<0.017 <0.018 <0.022
Dichlorodifluoromethane 340.00 <0.00536 <0.00573 <0.00711 <0.028 <0.016
<1.47 <1.44 <0.00610 <0.00620 <0.00763
Ethylbenzene 230.00 <0.00995 <0.011 0.818 <0.052 9.44 272 321 1.83 0.144J
0.195J
Hexachlorobutadiene 22.80 <0.011 0.179J <0.015 <0.059 <0.033 <3.09 <3.02
<0.013 <0.013 <0.016
Isopropylbenzene (Cumene) 580.00 <0.00942 0.236J 0.942J 32.6J 12.6J 1660J
543J 0.221J 0.328J 0.427J

Methyl acetate 6589.22 <0.017 <0.018 1.03 <0.086 <0.048 <4.53 <4.43
<0.019 <0.019 <0.024
Methyl iodide 121.39 <0.063 <0.068 <0.084 <0.330 <0.186 <17.4 <17.0
<0.072 <0.073 <0.090
Methylcyclohexane 140.00 <0.00792 <0.00847 <0.010 <0.041 <0.023 <2.17
<2.12 <0.00901 <0.00916 <0.011
Methylene chloride 22.00 <0.017 <0.018 0.062J <0.088 <0.049 <4.61 <4.50
<0.019 <0.019 <0.024
Naphthalene 189.76 <0.040 0.101J 0.49 <0.208 <0.117 <10.9 16.4J 0.427
0.118J 0.164J
n-Butylbenzene 240.00 <0.017 <0.018 <0.022 <0.088 <0.049 <4.63 <4.52
<0.019 <0.019 <0.024
n-Propylbenzene 240.00 <0.013 <0.014 <0.017 <0.068 <0.038 <3.59 <3.51
0.155J <0.015 <0.019
o-Xylene 280.00 <0.00913 <0.00976 0.176J <0.048 1.95 167 68.6 0.357
0.109J 0.087J
sec-Butylbenzene 220.00 <0.012 <0.013 <0.016 <0.063 <0.036 <3.33 <3.25
<0.014 <0.014 <0.017
Styrene 1700.00 <0.013 <0.014 <0.017 <0.066 <0.037 21.8J 15.2J <0.015
<0.015 <0.018

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SC-W SC-E

tert-Butyl methyl ether (MTBE)	41.00	<0.00807	<0.00862	<0.011	<0.042
0.234J <2.21	<2.16	0.479	<0.00932	<0.011	
tert-Butylbenzene	390.00	<0.011	<0.012	<0.015	<0.060
				<0.034	<3.14
				<3.07	
<0.013	<0.013	<0.016			
Tetrachloroethene	1.70	<0.0100	2.5	0.835	<0.052
				<0.029	<2.74
				<2.68	<0.011
<0.012	<0.014				
Toluene	520.00	<0.00966	<0.010	0.227J	<0.050
1				37.0J	23.8J
				0.271J	<0.011
<0.014					
trans-1,2-Dichloroethene	240.00	<0.00976	<0.010	<0.013	<0.051
				<0.029	
<2.68	<2.61	<0.011	<0.011	<0.014	
trans-1,3-Dichloropropene	60.91	<0.011	<0.011	<0.014	<0.055
				<0.031	<2.92
<2.85	<0.012	<0.012	<0.015		
trans-1,4-Dichloro-2-butene	0.29	<0.027	<0.029	<0.036	<0.143
				<0.080	<7.53
<7.35	<0.031	<0.032	<0.039		
Trichloroethene	0.10	0.112J	0.118J	1.02	<0.059
				<0.033	<3.10
				<3.03	0.174J
<0.013	<0.016				
Trichlorofluoromethane	1400.00	<0.00647	<0.00692	<0.00858	<0.034
				<0.019	
<1.78	<1.73	<0.00736	<0.00748	<0.00922	
Trichlorotrifluoroethane	5600.00	<0.056	<0.059	<0.074	<0.290
				<0.163	<15.2
<14.9	<0.063	<0.064	<0.079		
Vinyl acetate	1600.00	<0.011	<0.011	<0.014	<0.056
				<0.031	<2.94
<0.012	<0.012	<0.015			
Vinyl chloride	0.43	<0.00652	<0.00697	<0.00864	<0.034
				<0.019	<1.79
<0.00742	<0.00754	<0.00928			
Xylene (total)	210.00	<0.033	<0.035	0.298J	<0.173
1.95				167	68.6J
0.226J	0.187J				1.02
SVOCs					
1,2Diphenylhydrazine/Azobenzen	2.40	<0.00894	<0.00901	<0.00900	<0.00939
<0.010	<0.010	<0.010	<0.00962	<0.00981	<0.010
2,4,5-Trichlorophenol	12499.12	<0.047	<0.047	<0.047	<0.049
				<0.053	<0.054
<0.053	<0.050	<0.051	<0.053		
2,4,6-Trichlorophenol	170.00	<0.062	<0.062	<0.062	<0.065
				<0.070	<0.070
<0.069	<0.066	<0.068	<0.070		
2,4-Dichlorophenol	1683.88	<0.063	<0.064	<0.064	<0.066
				<0.072	<0.072
<0.071	<0.068	<0.069	<0.072		
2,4-Dimethylphenol	2867.85	<0.050	<0.050	<0.050	<0.053
				<0.057	<0.057
<0.056	<0.054	<0.055	<0.057		
2,4-Dinitrophenol	1362.67	<0.211	<0.212	<0.212	<0.221
				<0.238	<0.241
<0.236	<0.227	<0.231	<0.238		
2,4-Dinitrotoluene	20.62	<0.055	<0.056	<0.056	<0.058
				<0.063	<0.063
<0.060	<0.061	<0.063			
2,6-Dinitrotoluene	28.05	<0.023	<0.023	<0.024	<0.026
				<0.027	<0.026
<0.025	<0.025	<0.026			
2-Chloronaphthalene	26000.00	<0.021	<0.021	<0.021	<0.022
				<0.024	<0.024
<0.024	<0.023	<0.023	<0.024		
2-Chlorophenol	260.00	<0.030	<0.030	<0.030	<0.032
				<0.034	<0.035
<0.033	<0.033	<0.034			

2-Methylnaphthalene 2477.58 <0.021 0.128J 0.145J <0.022 <0.024 1.29J
0.55J <0.023 <0.023 0.073J

2-Nitroaniline 2000.00 <0.044 <0.045 <0.044 <0.046 <0.050 <0.050 <0.050
<0.048 <0.048 <0.050

2-Nitrophenol 405.55 <0.018 <0.018 <0.018 <0.019 <0.020 <0.021 <0.020
<0.019 <0.020 <0.020

3,3'-Dichlorobenzidine 4.30 <0.251 <0.253 <0.253 <0.264 <0.284 <0.287
<0.282 <0.270 <0.276 <0.284

3-Nitroaniline 155.19 <0.048 <0.048 <0.048 <0.050 <0.054 <0.055 <0.054
<0.052 <0.053 <0.054

4,6-Dinitro-2-methylphenol 0.00 <0.039 <0.039 <0.039 <0.041 <0.044 <0.044
<0.043 <0.042 <0.044

4-Bromophenyl phenyl ether 1.10 <0.035 <0.035 <0.035 <0.036 <0.039 <0.040
<0.039 <0.037 <0.038 <0.039

4-Chloro-3-methylphenol 2992.21 <0.031 <0.031 <0.031 <0.033 <0.035 <0.035
<0.035 <0.033 <0.034 <0.035

4-Chloroaniline 2700.00 <0.039 <0.039 <0.039 <0.041 <0.044 <0.045 <0.044
<0.042 <0.043 <0.044

4-Chlorophenyl phenyl ether 0.80 <0.044 <0.044 <0.044 <0.046 <0.049
<0.050 <0.049 <0.047 <0.048 <0.049

4-Nitroaniline 0.00 <0.073 <0.074 <0.074 <0.077 <0.083 <0.084 <0.082
<0.079 <0.080 <0.083

4-Nitrophenol 107.23 <0.136 <0.137 <0.137 <0.143 <0.154 <0.155 <0.152
<0.146 <0.149 <0.154

Acenaphthene 33000.00 <0.022 0.142 0.069J <0.023 <0.025 0.233 0.084J
<0.024 <0.024 <0.025

Acenaphthylene 37163.64 <0.013 0.45J 0.058J <0.014 <0.015 0.574J 0.037J
0.040J 0.045J <0.015

Acetophenone 1700.00 <0.024 <0.025 0.068J <0.026 0.046J 0.951 0.487
<0.026 <0.027 <0.028

Aniline 92.50 <0.021 <0.021 <0.021 <0.022 <0.024 <0.024 <0.024 <0.023
<0.023 <0.024

Anthracene 100000.00 <0.014 0.257 0.113 <0.015 <0.016 0.072J <0.015
<0.015 0.053J 0.025J

Atrazine (Aatrex) 8.60 <0.058 <0.059 <0.058 <0.061 <0.066 <0.066 <0.065
<0.063 <0.064 <0.066

Benzaldehyde 344.36 <0.035R <0.036R <0.035R <0.037R <0.040R <0.040R
<0.040R <0.038R <0.039R <0.040R

Benzidine 0.01 <1.96 <1.96 <1.98 <2.06 <2.22 <2.24 <2.20 <2.11 <2.16
<2.22

Benzo(a)anthracene 2.30 <0.017 0.275 0.217 <0.018 <0.019 <0.019 <0.019
<0.018 0.094 0.060J

Benzo(a)pyrene 0.23 <0.023 0.188 0.162 <0.024 <0.026 <0.026 <0.025 <0.024
0.103 0.062J

Benzo(b)fluoranthene 2.30 <0.012 0.295J 0.346J <0.013 <0.014 <0.014
<0.014 <0.013 0.293J 0.244J

Benzo(g,h,i)perylene 18581.82 <0.011 0.236J 0.286J <0.011 <0.012 <0.012
<0.012 0.181J 0.328J 0.228J

Benzo(k)fluoranthene 23.00 <0.018 0.079J 0.074J <0.019 <0.020 <0.021
<0.020 <0.019 0.065J 0.038J

Benzoic acid 496.39 <0.136 <0.137 <0.137 <0.143 <0.154 <0.155 <0.152
<0.146 <0.149 <0.154

Benzyl alcohol 6245.03 <0.046 <0.046 <0.046 <0.048 <0.052 <0.052 <0.051
<0.049 <0.050 <0.052

Biphenyl 193.66 <0.013 0.062J 0.058J 0.029J <0.015 0.435J 0.180J <0.014
<0.014 <0.015

Bis(2-Chloroethoxy)methane 6.25 <0.022 <0.022 <0.023 <0.025 <0.025
<0.024 <0.023 <0.024 <0.025
Bis(2-Chloroethyl)ether 0.62 <0.030 <0.030 <0.031 <0.034 <0.034
<0.033 <0.032 <0.033 <0.034
Bis(2-Chloroisopropyl)ether 107.99 <0.020 <0.020 <0.020 <0.021 <0.023
<0.023 <0.023 <0.022 <0.022 <0.023
Bis(2-Ethylhexyl)phthalate 140.00 <0.015 0.275 0.501 0.112 <0.017 <0.017
<0.017 0.115 0.154 0.123
Butyl benzyl phthalate 240.00 <0.00828 <0.00835 <0.00834 <0.00871
<0.00938 <0.00947 <0.00930 <0.00892 <0.00909 <0.00938
Caprolactam 234.60 <0.042 27.5 <0.042 <0.044 <0.047 <0.048 <0.047 <0.045
<0.046 <0.047
Carbazole 96.00 <0.028 <0.028 <0.028 <0.030 <0.032 <0.032 <0.032 <0.030
<0.031 <0.032
Chrysene 230.00 <0.013 0.377J 0.215J <0.014 <0.015 <0.015 <0.015 0.023J
0.133J 0.081J
Dibenz(a,h)anthracene 0.23 <0.011 <0.011 <0.011 <0.011 <0.012 <0.012
<0.012 <0.012 <0.012 <0.012
Dibenzofuran 1700.00 <0.014 <0.014 <0.014 <0.014 <0.015 <0.016 <0.015
<0.015 <0.015 <0.015

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T-6EAST

T-6SOUTH

T-6NORTH

SC-W SC-E

Diethyl phthalate 2041.30 <0.036 <0.037 <0.037 <0.038 <0.041 <0.041
 <0.041 0.044J 0.045J <0.041

Dimethyl phthalate 932.98 <0.00870 <0.00877 <0.00876 <0.00914 <0.00985
 <0.00994 <0.00976 <0.00937 <0.00955 <0.00985

Di-n-butyl phthalate 16229.73 <0.00948 <0.00956 <0.00955 0.015J 0.013J
 <0.011 0.017J <0.010 <0.010 <0.011

Di-n-octyl phthalate 27000.00 <0.013 <0.013 <0.013 <0.014 <0.015 <0.015
 <0.014 <0.014 <0.015

Fluoranthene 24000.00 0.017J 0.352J 0.42 <0.00913 <0.00984 0.040J 0.048J
 0.015J 0.178J 0.111J

Fluorene 24775.76 <0.012 0.16 0.115 0.020J <0.014 0.268 0.106 <0.013
 <0.013 0.018J

Hexachlorobenzene 1.20 <0.047 <0.047 <0.047 <0.049 <0.053 <0.054 <0.053
 <0.051 <0.052 <0.053

Hexachlorocyclopentadiene 10.18 <0.059 <0.059 <0.059 <0.062 <0.066 <0.067
 <0.066 <0.063 <0.064 <0.066

Hexachloroethane 140.00 <0.058 <0.059 <0.059 <0.061 <0.066 <0.067 <0.065
 <0.063 <0.064 <0.066

Indeno(1,2,3-cd)pyrene 2.30 <0.016 0.257J 0.312J <0.017 <0.018 <0.018
 <0.018 <0.017 0.333J 0.259J

Isophorone 1903.23 <0.013 <0.013 <0.013 <0.014 <0.015 <0.015 <0.014
 <0.014 <0.014 <0.015

Nitrobenzene 110.00 <0.018 <0.018 <0.018 <0.019 <0.021 <0.021 <0.020
 <0.020 <0.020 <0.021

n-Nitrosodimethylamine 0.04 <0.020 <0.020 <0.020 <0.021 <0.023 <0.023
 <0.022 <0.021 <0.022 <0.022

n-Nitrosodi-n-propylamine 0.27 <0.020 <0.020 <0.020 <0.021 <0.023 <0.023
 <0.023 <0.022 <0.022 <0.023

n-Nitrosodiphenylamine 390.00 <0.012 <0.013 <0.013 <0.013 <0.014 <0.014
 <0.014 <0.013 <0.014 <0.014

o-Cresol 1922.57 <0.012 <0.012 <0.012 <0.013 <0.014 0.156J <0.013 <0.013
 <0.013 <0.014

Pentachlorophenol 10.00 <0.032 <0.032 <0.032 <0.034 <0.036 <0.037 <0.036
 <0.035 <0.035 <0.036

Phenanthrene 18581.82 <0.016 1.18 0.493 0.024J <0.018 0.29 0.129 0.019J
 0.105 0.077J

Phenol 2384.11 <0.019 <0.019 <0.019 <0.020 <0.022 <0.022 <0.021 0.092J
 <0.021 <0.022

Pyrene 18581.82 <0.055 0.832J+ 0.380J <0.058 <0.062 0.063J <0.062 <0.059
 0.220J 0.122J

Pyridine 142.66 <0.022 <0.022 <0.022 <0.023 <0.025 <0.025 <0.025 <0.024
 <0.024 <0.025

Notes:

1. All values in mg/kg.

2. Comparison criteria are the lower of the chemical of interest's EPA Region 6 Soil Screening Criteria value and TCEQ TotSoilComb value.

3. Sample locations are as follows (see text for additional descriptions):

T-15-F: from base of scraped area approximately 0.8 ft. below ground surface (bgs)

T-21-F: from base of scraped area approximately 0.5 ft. bgs

NC-0-0.3: from containment area floor surface to depth of 0.3 ft. bgs

T-2-WEST: west wall of excavation, near southwest corner, 2.5 ft bgs

T-6-FLOOR: floor of excavation, 5.8 ft bgs

T-6-EAST: east wall of excavation, 4.0 ft bgs

T-6-SOUTH: south wall of excavation, 4.5 ft bgs

T-6-NORTH: north wall of excavation, 2.0 ft bgs

SC-W: clay surface at base of trench, 0.7 ft bgs

SC-E: clay surface at base of trench, 0.7 ft bgs

4. Bold values exceed comparison criteria.

5. Data Qualifiers: J = estimated value; J+ = estimated value, biased high; R = rejected value.

Page 3 of 3

FIGURES

APPENDIX A
REMOVAL ACTION WORK PLAN

APPENDIX B
REMOVAL ACTION PHOTOGRAPHS

Photograph 1 - Looking southeast at North Containment during EEI mobilization and setup.

Holes have been cold-cut in large ASTs to allow access for pumping liquids.

Photograph 2 - Looking north along west side of AST Tank Farm - first pumping of accumulated water from the containment areas.

Photograph 3 - Looking south along east side of east barge slip - pumping water from containment areas into the Intracoastal Waterway.

Photograph 4 - Looking south in South Containment following rain event in late-

December 2010. South Containment Area water sample was collected beyond blue drum on left side of photograph.

Photograph 5 - Accumulated water in footprint of Tank No. 6 following rain event in late-December 2010. One of two North Containment Area water samples was collected from this location.

Photograph 6 - Accumulated water in low area around Tank No. 21 (left) and Tank No. 15 (right) following rain event in late-December 2010. The second of two North Containment Area water samples was collected near the upended bottom of Tank No. 21.

Photograph 7 - Asbestos inspector collecting sample of the flange gasket
on the
east end of Tank No. 10.

Photograph 8 - Contractors using cutting torch to cut out entire flange
on the east
end of Tank No. 10 with its gasket containing asbestos.

Photograph 9 - Contractors placing flange from east end of Tank No. 10 into a drum for storage and disposal. Flange was wrapped in plastic to secure the gasket while the contractor acquired an over-size drum.

Photograph 10 - Pumping liquid wastes from Tank No. 21 into tanker. Note the tanker is staged in temporary containment and tanker vent is connected to a carbon canister (green drum) to collect air vent emissions.

Photograph 11 – Pumping liquid wastes from small ASTs located in the South Containment Area.

Photograph 12 – Pumping liquid wastes directly from ASTs into tanker staged inside temporary containment.

Photograph 13 – Air monitoring performend during pumping activities included periodic checking of the carbon canister exhaust for breakthrough.

Photograph 14 – Truck moving loaded tanker out of temporary containment in preparation for transporting to the Clean Harbors facility.

Photograph 15 - Looking south - the contractor using hydraulic sheers to open Tank No. 21 to allow access for solidification of tank contents after liquids were removed.

Photograph 16 - Looking west - the contractor using hydraulic sheers to open the top of small AST (Tank No. 13) to allow access for solidification of material remaining in the tank.

Photograph 17 – Looking west – Tank No. 21 is on the right and Tank No. 15 is on the left. The contractor is adding fly ash to the contents of Tank No. 21 during solidification activities.

Photograph 18 – Looking south into Tank No. 6 – the contractor is using the trackhoe to mix fly ash with sludge in Tank No. 6 to facilitate solidification.

Photograph 19 - Looking southwest - Tank No. 21 is on the right and Tank No. 15 is on the left.

The contractor is using the trackhoe to mix fly ash with the sludge in Tank No. 15 during sludge solidification.

Photograph 20 - Looking south - the contractor is using the trackhoe to mix fly ash with sludge in Tank No. 13 located in the South Containment Area.

Photograph 21 – Looking west – loading solidified sludge from Tank No. 15 to roll-off boxes.

Photograph 22 – Action Resources truck picking up roll-off box loaded with sludge for transport to the Clean Harbors facility.

Photograph 23 - Contractor shoveling out the last of the sludge from the bottom of Tank No. 15.

Each AST was decontaminated by hand-shoveling the last of the sludge, and at a minimum scraping, brushing and steam-cleaning. Surfacants were used as needed to remove any residual

oily film.

Photograph 24 - Contractor steam-cleaning the bottom of Tank No. 15 after the last of the sludge

was scraped out.

Photograph 25 - Contractor decontaminating Tank No. 6 in preparation for demolition.

Photograph 26 - One-half of the bottom of Tank No. 21 after it was decontaminated and readied for demolition.

Photograph 27 - Contractor using a cutting torch to cut the top off of Tank No. 15 as part of the tank demolition and to allow access for tank decontamination.

Photograph 28 - Contractor using the trackhoe to remove the upper portion of Tank No. 15 from the bottom after torch cutting.

Photogrpah 29 - Contractor using the track hoe to demolish small ASTs in the South Containment Area. Demolished and crushed tanks and tank pieces were loaded into scrap boxes (right side of photograph) for transport to the metal recycler.

Photograph 30 - Contractor crushing pieces of Tank Nos. 6 and 15 prior to loading pieces into the scrap box (far left).

Photograph 31 – Contractor loading one-half of Tank No. 14 into scrap box for transport to the metal recycler. Tank No. 14 is the only tank that was not completely demolished on-site.

Photograph 32 – “Air-Mover” with in-line vacuum box used during decontamination of the South Containment Area.

Photograph 33 – Contractor using pressure washer (steam cleaner) and air mover to clean and vacuum mud and sediment from concrete in South Containment Area.

Photograph 34 – Looking east near northeast corner of South Containment Area after cleaning was

complete. Note the network of trenches and clay bottom of the trenches.

Photograph 35 – Looking northeast at South Containment Area after the trenches were filled with sandy clay from an off-site quarry.

Photograph 36 – Contractor breaching concrete berm of the South Containment Area at the northeast corner of the containment area, after decontamination was complete and trenches backfilled with sandy clay. The water seen here accumulated after all site-work was completed.

Photograph 37 - Looking northwest at South Containment Area after accumulated water was drained by breaching the concrete berm in both the northwest corner (on left in the distance) and the northeast corner (far right).

Photograph 38 - Looking south at the footprint of Tank No. 6 after the tank was overturned. Floor of containment area beneath the tank was visibly impacted.

Photograph 39 – Looking southeast at the Tank Nos. 2 and 6 excavation area. The footprint of Tank No. 2 is on the right and not visibly impacted other than the far south end. Visibly impacted soil can be seen in the south and east walls of the excavation, below a depth of approximately 2.5 feet below ground surface (center and left side of photograph).

Photograph 40 – Looking north at the footprints of Tank Nos. 15 and 21 after visibly impacted caliche base had been scraped and stockpiled along the east wall of the containment (right side of photograph). The stockpiled material was loaded into a roll-off box for off-site disposal at the Clean Harbors facility.

Photograph 41 – Looking southeast at the Tank Nos. 2 and 6 excavation during backfill with sandy clay. Contractor laid plastic in the excavation prior to backfilling.

Photograph 42 – Looking east at the North Containment Area after excavation and scraped areas were backfilled, all debris removed, and containment area graded to drain to the east.

Photograph 43 – Contractor breaching concrete berm along east side of North Containment Area.

Water seen here, and being released with the breaching of the berm, accumulated after site-work

was complete, and confirmation water sample was collected, analyzed and evaluated.

Photograph 44 – Looking east – North Containment Area after concrete berm was breached and most of accumulated water had drained.

Photograph 45 – Looking southeast at the former AST Tank Farm after site-work was completed –
the former AST Tank Farm is in the center of the photograph. The roll-off boxes contain impacted
soil awaiting transport to the Clean Harbors facility.

APPENDIX C

TCEQ SURFACE WATER DISCHARGE AUTHORIZATION LETTER

APPENDIX D
WASTE DISPOSAL MANIFESTS

APPENDIX E

ASBESTOS INSPECTION REPORT AND RELATED INFORMATION

Asbestos Inspection

Tank Farm
906 Marlin Avenue

Freeport Brazoria County, Texas 77541
Report 20110073 / November 19, 2010

November 19, 2010

Mr. Tony Maag
Columbia Environmental Services, Inc.
13222 Reeveston Road
Houston, Texas 77039
713-868-4845 ext 5651 email tmaag@columbiaenviro.com

RE: 20110073

Dear Mr. Maag:

Phase Engineering, Inc. (Texas Department of State Health Services [TDSHS] license # 10-0224) has conducted an asbestos inspection for demolition purposes of the suspect materials in the tank farm area located at 606 Marlin Avenue, Freeport, Brazoria County, Texas 77541.

- Date of Inspection: November 16, 2010.
- Location Contact: Mr. Tony Maag, Telephone 281-740-6607.
- Site maps were not provided by client.
- Known areas not available for access: None (0).
- Person(s) Conducting Inspection & Texas Department of State Health Services (TDSHS)
License Number: Neal Barnes TDSHS # 105626.
- Total number of samples taken: Seven (7).
- Number of samples analyzed: Seven (7).
- Number of samples containing more than 1% asbestos: One (1).
- Number of samples containing asbestos but less than 1%: None (0).
- Laboratories Conducting Analysis and Method: Micro Analytical Services. (TDSHS License number # 30-0304), Methods - Interim 40 CFR Part 763 Appendix E to Subpart E
Environmental Protection Agency (EPA), Improved EPA 600/R-93/116. 94
The potential Asbestos Containing Building Material (ACBM) samples collected (potential ACBMs
that tested positive for asbestos or are assumed positive are shaded in yellow), their descriptions,
and their locations are summarized in the following table:

SampleNumber	Type / Condition Well# / Location Friable/Percent	Asbestos
1-1-I-1	Loose Insulation - White Fibrous Insulation / Damaged	

Northeast Metal Flanked
Catch Area
Yes / None Detected
2-2-G-1 Metal Gasket Material - Rusted Non-fibrous
Metal / Damaged
Southeast Tank in
Northeast Berm Area
No / None Detected
3-3-G-1 Gasket Material - Black Fibrous Gasket + Beige
Paint / Good
Piping in Northeast
Berm Area
No / None Detected
4-4-H-1 Hose Material - Black Fibrous Hose / Good Northeast Berm Area No
/ None Detected
5-5-G-1 Gasket Material - Gray Fibrous Transite / Good Southeast AST In
Southeast Berm Area
Yes / 4% Chrysotile
6-6-G-1 Gasket Material - Green Fibrous Gasket Material
/ Good
Third AST from the
Northwest End of
Southeast Berm Area
Yes / None Detected
7-7-I-1 Tank Insulation - Dark Non-fibrous Mastic /
Damaged
Third AST from the
Northwest End of
Southeast Berm Area
Yes / None Detected

See lab results and sample photographs attached to this letter. Under EPA
600/R-93/116;
Interim 40 CFR Part 763 Appendix E to Subpart E it is not necessary to
separate layers for point
counting if the individual components are proportioned equally.

The inspection performed by Phase Engineering, Inc. was a suspect asbestos containing materials (ACMs) inspection for demolition purposes of the suspect materials in the tank farm area located at 606 Marlin Avenue, Freeport, Brazoria County, Texas 77541 following the National Emission Standards for Hazardous Air Pollutants (Title 40 CFR, Part 61). The inspector was provided no historical documentation of original construction or renovations of the buildings. No previous asbestos inspection reports or abatement reports were provided to the inspector. This inspection is not intended to comply with AHERA 40 CFR 763. All ACMs found and their homogeneous areas are assumed to be asbestos containing until a full asbestos inspection has been conducted.

Site Specific Details:

- The sampling protocol followed for this inspection was intended for demolition purposes of the suspect materials in the tank farm area located at 606 Marlin Avenue, Freeport, Brazoria County, Texas 77541.
- The specific square footage of each homogeneous suspect ACM area is not included as a part of this limited asbestos inspection.

Although Phase Engineering, Inc. uses trained and licensed inspectors in attempting to locate and identify materials potentially containing asbestos, Phase Engineering, Inc. does not warrant that all materials containing asbestos have been identified. It is possible that there are materials containing asbestos that were not found because they were not visible or accessible to the inspector, or for various other reasons, were not sampled. Moreover, it is possible that the actual quantities of materials will differ from the quantities of materials estimated during this survey.

Samples taken are categorized as either friable or non-friable. The term friable refers to the ease with which the material can be crumbled or made to produce dust using hand pressure alone. For example, ceiling tiles are generally considered friable, while floor tiles are generally considered non friable. Sheet rock wall materials are considered friable when damaged and non-friable when intact. The condition of the materials sampled is also categorized as good, damaged or significantly damaged.

A material is considered to be an ACM if it is composed of more than 1% asbestos components.

Findings:

The results found during the asbestos inspection indicated one suspect ACMs sampled contained asbestos above 1%. The materials determined or assumed to be ACBMs are summarized in the following table:

TYPE OF MATERIAL	APPROXIMATE LOCATION OF ACBM
FRIABLE / NON-FRIABLE	
- CONDITION	
Gray Valve Gasket Southeast AST In Southeast Berm Area an All Gray Gaskets	
Friable - Good	

No other suspect ACMs analyzed were found to contain asbestos of the suspect materials in the tank farm area located at 606 Marlin Avenue, Freeport, Brazoria County, Texas 77541

Recommendations:

It is recommended that any ACMs or assumed ACMs, that will be disturbed, be removed by a licensed abatement contractor and if applicable, a licensed asbestos consultant. The TDSHS Demolition/Renovation Notification form can be used to meet the requirements of the National Emission Standards for Hazardous Air Pollutants, 40 CFR, Subpart M (NESHAP). These regulations require that written notification be submitted before beginning renovation projects that include the disturbance of any asbestos-containing material in a facility. A notification form is required before the demolition of a building or facility, even when no asbestos is present.

This form must be used to fulfill these requirements. Please call either 512-834-6610 or 1-800572-5548 (within Texas), or your local regional office for assistance in completing this form.

During renovation or demolition activities, care should be exercised in dealing with all materials even those shown to be non-asbestos containing (this would include materials technically considered as non-asbestos containing because they are below the one percent limit). If these non-asbestos materials are to be disturbed work practices should be used that will limit exposure to dust and debris. Contractors performing this work should conform to OSHA regulations outlined in 29 CFR 1926.55 (exposure limits can be found in 29 CFR 1910.1000 Table Z-3).

In the event of future renovation and or demolition, further sampling may be required of suspect asbestos containing materials prior to these activities to satisfy the Environmental Protection Agency (EPA), Occupational Safety and Health Administration (OSHA), and Texas Department of State Health Services (TDSHS) rules and regulations at that time. If suspect asbestos containing building materials (not noted during this inspection) should be found during any renovation or demolition, these materials should be sampled for asbestos and handled appropriately following all local, state and federal rules and regulations at that time.

If improper renovation or demolition occurs the owner is subject to a \$10,000 a day fine, enforced by the Texas Department of State Health Services (TDSHS).

Thank you for the opportunity to work with you on your environmental needs. If you have any questions, please call me at (713) 476-9844 or 1-800-419-8881.

Sincerely,

Neal Barnes, P.G.
Asbestos Individual Consultant
TDSHS License # 105626

ASBESTOS SAMPLE PHOTOGRAPHS

Photo 1: 1-1-I-1 Photo 2: 2-1-G-1 Photo 3: 3-1-G-1

Photo 4: 4-4-H-1 Photo 5: 5-1-G-1 Photo 6: 6-6-G-1

Photo 7: 7-7-I-1

ASBESTOS LABORATORY RESULTS

Micro Analytical Services, Inc. 11301 Richmond Ave. Ste.K100B.Houston.Tx
77082.Phone(281)497-4500.Fax(281)497-4517

NVLAP Lab No. 200618-0 TDSHS License No. 30-0304

PILM BULK ASBESTOS ANALYSIS REPORT

CLIENT: Phase Engineering, Inc. MAS JOB NO.: 8040-00

PROJECT: 906 Marlin REPORT DATE: November 18, 2010

IDENTIFICATION: Asbestos, Bulk Sample Analysis, Quantitation by Visual Area Estimation

TEST METHOD: Polarized Light Microscopy with Dispersion Staining

EPA Test Method 600/M4-82-020;

Interim (40CFR Part 763 Appendix E to Subpart E)

STATEMENT OF LABORATORY ACCREDITATION

These samples were analyzed at Micro Analytical Services, Inc. in the Asbestos Laboratory at 11301 Richmond Ave. Suite K100B, Houston, Texas, 77082. The Laboratory holds accreditation from the National Institute of Standards and Technology under the National Voluntary Laboratory Accreditation Program (NVLAP). This laboratory is also licensed and authorized to perform as an Asbestos Laboratory in the State of Texas within the purview of Texas Civil Statutes, Article 4477-3a, as amended, so long as this license is not suspended or revoked and is renewed according to the rules adopted by the Texas Board of Health.

The samples were analyzed in general accordance with the procedures outlined in the Method for the Determination of Asbestos in Bulk Building Materials, EPA/600/M4-82-020 or the U.S. Environmental Protection Agency method, under AHERA, for the analysis of asbestos in building materials by polarized light microscopy. The results of each bulk sample relate only to the material tested and the results shall not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.

Specific questions concerning bulk sample results shall be directed to the Asbestos Bulk Laboratory at Micro Analytical Services, Inc.

Analyst: Tony T. Dang

Approved Signatory:

Micro Analytical Services, Inc. 11301 Richmond Ave. Ste.
K100B.Houston.Texas 77082.Phone(281) 497-4500.Fax(281) 497-4517

Polarized Light Microscopy Analysis

Phase Engineering, Inc. MAS Project #: 8040-00
335 West 21st Street Date Received: 11/17/2010
Houston, Texas 77008 Date Analyzed: 11/18/2010

Project Name: 906 Marlin

Field ID/ Layer #	Sample Description	Asbestos	Non-Asbestos
Lab ID	Detected?	Constituents	Constituents
(Yes/No)	(%)	(%)	
1-1-I-1	1 White fibrous insulation	No	100% fibrous Glass
MAS210374			
2-2-G-1	1 Rusted non-fibrous metal	No	100% Metal
MAS210375			
3-3-G-1	1 Black fibrous gasket with beige paint	10%	Synthetic
MAS210376			Rubber
4-4-H-1	1 Black fibrous hose	No	10% Synthetic
MAS210377			30% Cellulose
			60% Rubber
5-5-G-1	1 Grey fibrous transite	Yes	25% Chrysotile 75% Other
MAS210378			
6-6-G-1	1 Green fibrous gasket	No	40% Cellulose
MAS210379			60% Other
7-7-I-1	1 Dark non-fibrous mastic	No	100% Mastic
MAS210380			

Samples have been analyzed by the EPA Interim Method 600/M4-82-020. The test results herein relate only to the sample submitted and analyzed. This report may be only reproduced in full with the approval of the Bulk Asbestos Laboratory of Micro Analytical Services (MAS), Inc. The above percentages are visual estimates of area percent. MAS is not responsible for any errors resulting from improper or incorrect sampling or shipping procedures. These samples will be retained for a period of 30 days. Accreditation by NVLAP in no way constitutes or implies product certification, approval, or endorsement by NIST. Some materials, especially floor tiles, contain asbestos fibers too thin to be detected by this method. NVLAP Lab Code: 2000618 TDSHS License: 30-0341

Analyzed by: Tony Dang
Approved NVLAP Signatory: Tony Dang
Page 1 of 1

STATEMENT OF QUALIFICATIONS

LETTER OF ENGAGEMENT

Permit Information

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Wednesday, December 08, 2010

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?00 wEst sEcoND STREET I FREEPORT, TEXAS77541r PHONE (9?91233.3526
/ FAX(979)233_2172

PERMITAPPLICATION

Applicant's Name:

Owners Name:

OwnersAddress:

Fqa37

JOB INFORMATION

Contractor'sName: 6u,;*urno,
Work Location:

Description of Job 7x? n,L g

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November

16, 2010

Mr. Tony Maag
Columbia Environmental Inc.

Services,
13222 Reeveston Road
Houston, Texas 77039
713-868-4845 ext 5651 email tmaag@columbiaenviro.com

RE: Asbestos inspection for demolition purposes of the suspect materials in the tank farm area located at 606 Marlin Avenue, Freeport, Brazoria County, Texas 77541.

Dear Mr. Maag:

An asbestos inspection November (TDSHS license# 10

was conducted 15, 2010 by Neal Barnes (5626) of Phase Engineering, Inc. (TDSHS license# 10-4224) in accordance with the National Emission Standards for Hazardous Air Pollutants (Title 40, CFR, Part 61) of the suspect materials in the tank farm area located at 606 Marlin Avenue, Freeport, Brazoria County, Texas 77541 as described within the report to follow. Greater than 10 fibers of asbestos was detected in gray valve gasket material. No other asbestos greater than 10 fibers was detected in the suspect asbestos-containing building materials sampled and analyzed within the areas subject to renovation.

It is recommended that all asbestos-containing building materials (ACBMs) that will be disturbed be removed by a licensed abatement contractor and if applicable, a licensed asbestos consultant. Notification of the

If the facility is to be demolished or renovated that any ACBMs or assumed

The TDSHS Demolition/Renovation form combines requirements for Hazardous Air Pollutants, 40 CFR, Subpart

of the National Standards for the Texas Asbestos Health Protection Rules (TAFIPR). Both of these regulations require that written notification be submitted before beginning renovation projects that include the disturbance of asbestos-containing materials.

of any asbestos-containing material in a facility. A notification is required before the demolition of a building or facility, even when no asbestos is present. This

form must be used to fulfill either of the requirements. Please call either 512-834-6610

or 1800-572-5548 (within Texas), or your local regional office for assistance in completing this form.

During renovation or demolition activities, care should be exercised in dealing with all construction materials even those shown to be non-asbestos (this would include materials

containing technically considered containing they are below the one percent limit).

as non-asbestos because if these non-asbestos should be used that will limit

materials as it be disturbed work practices exposure to dust and debris. Contractors performing this work should conform to OSHA regulations in 29 CFR 1926.55 limits can be found in 29 CFR 1910.1000 Table

outlined (exposure z-3).

During renovation or demolition activities it is required to have a copy of the asbestos inspection report available during all phases of the renovation or demolition.

If you should have any questions or comments concerning the inspection or this letter please call me at (713) 476-9844 or (800) 419-8881. We appreciate you using Phase Engineering, environmental

Inc. professional services and look forward to serving you again in the near future.

Sincerely,

ua

!

".nnt

P.G.
Asbestos Consultant
TDSHS License # 105626
Neal Barnes,

335 West 21st Street, Houston, Texas 77008 (713) 476-9844 (713) 476-9797 Fax

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ASBESTOS/DEMOLITIONNOTIFICATION FORM

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N EMERGENCY

o Was emergency made to the Regional Health Notifications Group (EHNG) by phone?

request Office or Environmental
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rlf yes, the DSHS reference# '-rvithwhomyouspoke?

andnameof the Regional or EHNG representative

Date:)!-, LTirne: -flu.*.flP.*.

o Describethe reason for Emergency;

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orderandidentify GovernmeitalO!ficiat)

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TYPE OF WORK

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Abatement/Demolition
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1. FaelltlyLocation
..... DescriptionorFacility Name: FormerGulfcoMarineMaintangeFacilitv
....,...PhysicalAddress:906 marlin Ave
..... County:Efcde City: Freeogrt Zip: 77541
..... Facility Contact: Tonv Maas Phone #: (2!140-6607
2. Type of Facility (Selectone)
I puUticfJFederal f]IndustriaVManufacturing f|
XllreSHep-only PublicSchoolK-12

3. FactlityDetails n....Description of Area/Room Number:Tank Demo
t.....Ageof Building:30+ Size: ffi\$! Number of Floors: !
1.. Is this building occupied?[ves El No
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Inspection: 11116110
t.....DSHSInspectorLicense#: 105626
fAnalyticalMethod:[lfTU E ffU I AssumedAsbestosf]No
SuspectMaterial
f,DSHS Laboratory License#:30-0340

WORK SCHEDULE/ASBESTOS AMOUNTS (Note: lf tlrc start
date(s)eutederedbelowcanno, be ntet, the DSHS Regional or Locat
Programoftice must be notltled prior to tite scheddedstan date. Fqilure
to do so is a violotion of TAHPA Section 295,61.)

1, AsbestosAbatement\ffork Schedule:

f . . Start date: / | and End date: | |
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]..... Workinghours:-fl u.*. n p.*. to nu.*. [p.*.

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2. Demolition Work Schedule:
Startdate: 12108110 and End date: 01/06/11
wotkduy*iEiilii. fftrues.Xwe iThurs.Etrri. f]sut. [sun
Workinghoirn:!!Q El u.*. fl p.*. to 6:00 flu.*. Elp.*.

FORMAPB#5.REV
'07

(x)

Below if

rmended

C.ASBESTOSAFIOUNTS

n... .. Is Asbestos fil Vesfl No(Complete ispresent)

Present? the tqble below if asbestos

Asbestos-ContainingBuildin\$ Material Type Approximateamountof

Asbestos

Only mark the boxes below on this chart if the" are being amended Pipes

In In Surface Area sq sq Cu

FtM FtM Ft

RACM to be removed 2

RACM left in Dhcedurins demolition

Interior Category I non-friable removed

Exterior CategoryI non-friable removed

Catesorv I non-friable left in placedurins demolition

Interior CategoryII non-friable removed

Exterior Catesorv II non-friable removed

atesory II non-friableleft in placeduring demolition

RACM Off-Facility Component

DESCRIPTTqII OF WORK PRACTICES AND PROCEDURES

tr..... 1. Description of proceduresto be followed in the event that unexpected asbestos found or previouslynon-friableasbestos materialbecomescrumbled,pulverized,or reducedto powder:TDH Rules witl anplv

tr..... 2. Descriptionof planneddemolition or abatement u'ork,type of material, andmethod(s) to be used: Cut up and remove

.nks

and removal of ? souare feet of pagketmaterial

.... . . . , 3. Descriptionof workpracticesandengineeringcontrolsto be usedtopreventemissionsof asbestos atthe demolition site:

WearpronrPPE.cut flsgeoff and drum for disnosal

n

ifr6]sct n{roRMA.rron

n.,.... A. FAILITY owNER

Fhcility OwnerName: LDL Coastal LP

Phone#:t6J;tq0-660L

Attention: c/o Tony M4ae

Mailing Address: 13122Reeveston

City: Houston State:\$ Zip:77039

n.... . B. ASBESToSABATEMENT coNTRAcRoR #t

DSHS Asbestos Contractor License #:!i\$

ContractorName:!!!

Address:\$ \$

City:NA State: !!\$ Zip: !i\$
Oflice Phone #: () -Job-SitePhone #: ()

tr . . . c. ASBESTOS ABATEMENT CONTRACTOR #2 (Onlyif there is morethanone
Con#aeator)
DHS Asbestos Contractor License #: !l\$
ContractorName:!i\$
Address:!!!
City:NA State: !!2! Zip: NA
OfficePhone#: (NA) ---Job-Site Phone #: (NA)

D. ASBESTOS SUPERVISOR

n
. . DSHSSupervisorLicense#; !!! Site Supervisor:
tr. . . DHS Supervisor License#: SiteSupervisor:

FORMAPB#5. REV 5I07

(x)
felov if
mended E. NESHAP TRAINED INDIVIDUAL
n.
.NESHAPTrainedIndividual:!i3!
CertificationDate:
-,11

il....
r. DEMoLrrroN coNTRAcRoR
DemolitionContractor:EffectiveEnvlronr4nental. Inc.
Address:2515 S. Beltline Rd
City:Melg.Eilg State:\$ Zip: 75181Phone #: \$72\ 329-1200

D.,....c.pRoJECTcoNSULTANToRopERATOoR
DSHSLicense

No.:!81!!![!
Project Consultant or Operator: &nercon
Address:12100Ford Rd.Ste 200
City:Dallas State: ![Zip:75234 Phone #: 0721484-3854

tr ... [I. Waste Transporter
DSHSWasteTransporterLicense#:

-
Waste Transporter: to bedetermined
Address:
City:_ State:-Zip:

-
Contact Person: Phone#: ()

n.....t. Waste Disposal Site
TCEQ Permit #: 1721A
WasteDisposalSite: Waste Manasmenl
Address: 19818 E Highway 6
City: Alvin State:!! Zip:f1111
Phone#: {ol3\ 423-1714

CERTIFICATION STATEMENT
I hereby declarethat I have examined this notification and. to the best
of my knor.r'ledge

anCbelieei all informationprovidedis
complete,true,and correct. I affirm that I am the owner.operator,or
delegatedagentandthatI am responsible for thefir

associatedwith this noti I also understandthat the owner, operator,or delegated agent is responsiblefor notification to the department,

Date: 11125/10
ratoror Delegated Agent)

Name& Tit

E-mailAddress: tmaag@columbiaenyiro.com Phone#: (281) 740-6607

IMPOBTANT INFORMATION

NOTIFICATION TIMELINESS REQUIREMENT:
YourAsbestos/Demolition no lessthan ten workingdays (not

Notificationform must be postmarked
calendardays)priorto thestart of any asbestos abatementor dernolition.

FILING FEE: An invoicewill be mailed to the facility
owneruponcompletionof theproject.

CALL FOR ASSISTAIT{CE:
(512) 834-6747or (888) 778-9440 (toll freein Texas)

MAIL FORM TO:
ENVIRONMENTAL HEALTH NOTIFICATIONSGROUP
TEXASDEPARTMENTOFSTATEHEALTH SERVICES
PO BOX 143538

AUSTIN, TX 78714-3538

FORMAPB#5.REV5i07

APPENDIX F
TANK CERTIFICATES OF DESTRUCTION

APPENDIX G

NORTH CONTAINMENT AREA
SOIL EXCAVATION APPROACH DOCUMENTATION

APPENDIX H
LABORATORY ANALYTICAL AND VALIDATION REPORTS

NELAP CERTIFICATE NUMBER 01955
DOD ELAP CERTIFICATE NUMBER ADE -1482

ANALYTICAL RESULTS

PERFORMED BY

GULF COAST ANALYTICAL LABORATORIES, INC.
7979 GSRI Avenue
Baton Rouge, LA 70820

Report Date 01/03/2011

GCAL Report 210123108

210123108

Deliver To Pastor, Behling, Wheeler
2201 Double Creek Drive
Round Rock, TX 78664
512-671-3434
Attn Eric Pastor
Project Gulfco Marine Maintenance Site

CASE NARRATIVE

Client: Pastor, Behling, & Wheeler Report: 210123108

Gulf Coast Analytical Laboratories received and analyzed the sample(s) listed

on the sample cross-reference page of this report. Receipt of the sample(s) is documented

by the attached chain of custody. This applies only to the sample(s) listed in this report.

No sample integrity or quality control exceptions were identified unless noted below.

VOLATILES MASS SPECTROMETRY

In the SW-846 8260B analysis, samples 21012310802 (N. CONTAINMENT (NW)) and 21012310803 (N.

CONTAINMENT (NE)) had to be diluted to bracket the concentration of target compounds within the calibration range of the instrument. The dilutions are reflected in elevated detection limits.

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with GCAL's Standard Operating Procedures.

Common Abbreviations Utilized in this Report

ND Indicates the result was Not Detected at the specified RDL

DO Indicates the result was Diluted Out

MI Indicates the result was subject to Matrix Interference

TNTC Indicates the result was Too Numerous To Count

SUBC Indicates the analysis was Sub-Contracted

FLD Indicates the analysis was performed in the Field

PQL Practical Quantitation Limit

MDL Method Detection Limit

RDL Reporting Detection Limit

00:00 Reported as a time equivalent to 12:00 AM

Reporting Flags Utilized in this Report

J Indicates an estimated value

U Indicates the compound was analyzed for but not detected

B (ORGANICS) Indicates the analyte was detected in the associated Method

Blank

B (INORGANICS) Indicates the result is between the RDL and MDL

Sample receipt at GCAL is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of GCAL. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client.

Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with the NELAC standard and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

Robyn Migues
Technical Director
GCAL REPORT 210123108

THIS REPORT CONTAINS _____ PAGES.

Report Sample Summary

GCAL ID Client ID Matrix Collect Date/Time Receive Date/Time

21012310801	S.	CONTAINMENT	Water	12/30/2010	13:25	12/31/2010	08:50
21012310802	N.	CONTAINMENT(NW)	Water	12/30/2010	13:45	12/31/2010	08:50
21012310803	N.	CONTAINMENT(NE)	Water	12/30/2010	14:05	12/31/2010	08:50
21012310804	TRIP	BLANK	Water	12/30/2010	14:10	12/31/2010	08:50

GCAL Report 210123108

Summary of Compounds Detected

GCAL ID
21012310801
Client ID
S. CONTAINMENT
Matrix
Water
Collect Date/Time
12/30/2010 13:25
Receive Date/Time
12/31/2010 08:50
SW-846 8260B
CAS# Parameter Result RDL MDL Units
71-43-2
67-66-3
127-18-4
79-01-6
Benzene
Chloroform
Tetrachloroethene
Trichloroethene
5.66
1.54J
10.7
11.1
5
5
5
5
0.054
0.057
0.121
0.062
ug/L
ug/L
ug/L
ug/L
GCAL ID
21012310802
Client ID
N. CONTAINMENT (NW)
Matrix
Water
Collect Date/Time
12/30/2010 13:45
Receive Date/Time
12/31/2010 08:50
SW-846 8260B
CAS# Parameter Result RDL MDL Units
107-06-2
71-43-2
67-66-3
127-18-4
79-01-6
1,2-Dichloroethane

Benzene
Chloroform
Tetrachloroethene
Trichloroethene
7290
2000
5290
252
1930
250
250
250
250
250
4.30
2.71
2.83
6.05
3.09
ug/L
ug/L
ug/L
ug/L
ug/L
GCAL ID
21012310803
Client ID
N. CONTAINMENT(NE)
Matrix
Water
Collect Date/Time
12/30/2010 14:05
Receive Date/Time
12/31/2010 08:50

SW-846 8260B

CAS# Parameter Result RDL MDL Units

107-06-2 1,2-Dichloroethane 580 500 8.60 ug/L
71-43-2 Benzene 137J 500 5.42 ug/L
67-66-3 Chloroform 8660 500 5.65 ug/L
127-18-4 Tetrachloroethene 225J 500 12.1 ug/L

GCAL Report 210123108

GCAL ID
21012310801
Client ID
S. CONTAINMENT
Matrix
Water
Collect Date/Time
12/30/2010 13:25
Receive Date/Time
12/31/2010 08:50
SW-846 8260B
Prep Date Prep Batch Prep Method Dilution
1
Analyzed
12/31/2010 19:18
By
RJU
Analytical Batch
448261
CAS# Parameter Result RDL MDL Units
107-06-2
71-43-2
67-66-3
127-18-4
79-01-6
75-01-4
1,2-Dichloroethane
Benzene
Chloroform
Tetrachloroethene
Trichloroethene
Vinyl chloride
5U
5.66
1.54J
10.7
11.1
5U
5
5
5
5
5
0.086
0.054
0.057
0.121
0.062
0.093
ug/L
ug/L
ug/L
ug/L
ug/L
ug/L
CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits

460-00-4
1868-53-7
2037-26-5
17060-07-0
4-Bromofluorobenzene
Dibromofluoromethane
Toluene d8
1,2-Dichloroethane-d4
50
50
50
50
50.8
51.2
51.2
51.9
ug/L
ug/L
ug/L
ug/L
102
102
102
104
78 -130
77 -127
76 -134
71 -127

GCAL Report 210123108

GCAL ID
21012310802
Client ID
N. CONTAINMENT (NW)
Matrix
Water
Collect Date/Time
12/30/2010 13:45
Receive Date/Time
12/31/2010 08:50
SW-846 8260B
Prep Date Prep Batch Prep Method Dilution
50
Analyzed
12/31/2010 19:39
By
RJU
Analytical Batch
448261
CAS# Parameter Result RDL MDL Units
107-06-2
71-43-2
67-66-3
127-18-4
79-01-6
75-01-4
1,2-Dichloroethane
Benzene
Chloroform
Tetrachloroethene
Trichloroethene
Vinyl chloride
7290
2000
5290
252
1930
250U
250
250
250
250
250
250
4.30
2.71
2.83
6.05
3.09
4.65
ug/L
ug/L
ug/L
ug/L
ug/L
ug/L
CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits

460-00-4
1868-53-7
2037-26-5
17060-07-0
4-Bromofluorobenzene
Dibromofluoromethane
Toluene d8
1,2-Dichloroethane-d4
2500
2500
2500
2500
2590
2450
2630
2520
ug/L
ug/L
ug/L
ug/L
104
98
105
101
78 -130
77 -127
76 -134
71 -127

GCAL Report 210123108

GCAL ID
21012310803
Client ID
N. CONTAINMENT(NE)
Matrix
Water
Collect Date/Time
12/30/2010 14:05
Receive Date/Time
12/31/2010 08:50
SW-846 8260B
Prep Date Prep Batch Prep Method Dilution
100
Analyzed
12/31/2010 20:00
By
RJU
Analytical Batch
448261
CAS# Parameter Result RDL MDL Units
107-06-2
71-43-2
67-66-3
127-18-4
79-01-6
75-01-4
1,2-Dichloroethane
Benzene
Chloroform
Tetrachloroethene
Trichloroethene
Vinyl chloride
580
137J
8660
225J
500U
500U
500
500
500
500
500
500
500
8.60
5.42
5.65
12.1
6.18
9.30
ug/L
ug/L
ug/L
ug/L
ug/L
ug/L
CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits

460-00-4
1868-53-7
2037-26-5
17060-07-0
4-Bromofluorobenzene
Dibromofluoromethane
Toluene d8
1,2-Dichloroethane-d4
5000
5000
5000
5000
5120
5250
5180
5150
ug/L
ug/L
ug/L
ug/L
102
105
104
103
78 -130
77 -127
76 -134
71 -127

GCAL Report 210123108

GCAL ID
21012310804
Client ID
TRIP BLANK
Matrix
Water
Collect Date/Time
12/30/2010 14:10
Receive Date/Time
12/31/2010 08:50
SW-846 8260B
Prep Date Prep Batch Prep Method Dilution
1
Analyzed
12/31/2010 18:58
By
RJU
Analytical Batch
448261
CAS# Parameter Result RDL MDL Units
107-06-2
71-43-2
67-66-3
127-18-4
79-01-6
75-01-4
1,2-Dichloroethane
Benzene
Chloroform
Tetrachloroethene
Trichloroethene
Vinyl chloride
5U
5U
5U
5U
5U
5
5
5
5
5
5
0.086
0.054
0.057
0.121
0.062
0.093
ug/L
ug/L
ug/L
ug/L
ug/L
ug/L
CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits

460-00-4
1868-53-7
2037-26-5
17060-07-0
4-Bromofluorobenzene
Dibromofluoromethane
Toluene d8
1,2-Dichloroethane-d4
50
50
50
50
47.9
49.1
52.7
50.3
ug/L
ug/L
ug/L
ug/L
96
98
105
101
78 -130
77 -127
76 -134
71 -127

GCAL Report 210123108

GC/MS Volatiles Quality Control Summary

Analytical Batch 448261 Client ID MB448261 LCS448261 LCSD448261
Prep Batch N/A GCAL ID
Sample Type
Analytical Date
Matrix
909344
Method Blank
12/31/2010 17:55
Water
909345
LCS
12/31/2010 16:44
Water
909346
LCSD
12/31/2010 17:05
Water
SW-846 8260B Units
Result
ug/L
RDL
Spike
Added
Result
% R
Control
Limits % R
Result
% R RPD
RPD
Limit
67-66-3 Chloroform 5U 5 50.0 46.2 92 75 -122 45.7 91 1 30
107-06-2 1,2-Dichloroethane 5U 5 50.0 45.1 90 71 -129 44.8 90 0.7 30
127-18-4 Tetrachloroethene 5U 5 50.0 49.6 99 68 -128 49.4 99 0.4 30
75-01-4 Vinyl chloride 5U 5 50.0 49.1 98 68 -132 48.9 98 0.4 30
75-35-4 1,1-Dichloroethene 5U 5 50.0 49.0 98 69 -129 48.3 97 1 20
71-43-2 Benzene 5U 5 50.0 48.5 97 70 -129 48.2 96 0.6 20
79-01-6 Trichloroethene 5U 5 50.0 47.3 95 76 -129 47.7 95 0.8 20
108-88-3 Toluene 5U 5 50.0 47.5 95 72 -120 48.2 96 1 20
108-90-7 Chlorobenzene 5U 5 50.0 47.9 96 74 -123 47.7 95 0.4 20
Surrogate
460-00-4 4-Bromofluorobenzene 47.8 96 50 49.7 99 78 -130 49.4 99
1868-53-7 Dibromofluoromethane 48.7 97 50 49.3 99 77 -127 49.3 99
2037-26-5 Toluene d8 52.5 105 50 49.6 99 76 -134 50.1 100
17060-07-0 1,2-Dichloroethane-d4 49.1 98 50 48.9 98 71 -127 48.9 98

GCAL Report 210123108

NELAP CERTIFICATE NUMBER 01955
DOD ELAP CERTIFICATE NUMBER ADE -1482

ANALYTICAL RESULTS

PERFORMED BY

GULF COAST ANALYTICAL LABORATORIES, INC.
7979 GSRI Avenue
Baton Rouge, LA 70820

Report Date 01/20/2011

GCAL Report 211011920

211011920

Deliver To Pastor, Behling, Wheeler
2201 Double Creek Drive
Round Rock, TX 78664
512-671-3434
Attn Eric Pastor
Project GULFCO

CASE NARRATIVE

Client: Pastor, Behling, Wheeler Report: 211011920

Gulf Coast Analytical Laboratories received and analyzed the sample(s) listed

on the sample cross-reference page of this report. Receipt of the sample(s) is documented

by the attached chain of custody. This applies only to the sample(s) listed in this report.

No sample integrity or quality control exceptions were identified unless noted below.

No anomalies were found for the analyzed sample(s).

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with GCAL's Standard Operating Procedures.

Common Abbreviations Utilized in this Report

ND Indicates the result was Not Detected at the specified RDL

DO Indicates the result was Diluted Out

MI Indicates the result was subject to Matrix Interference

TNTC Indicates the result was Too Numerous To Count

SUBC Indicates the analysis was Sub-Contracted

FLD Indicates the analysis was performed in the Field

PQL Practical Quantitation Limit

MDL Method Detection Limit

RDL Reporting Detection Limit

00:00 Reported as a time equivalent to 12:00 AM

Reporting Flags Utilized in this Report

J Indicates an estimated value

U Indicates the compound was analyzed for but not detected

B (ORGANICS) Indicates the analyte was detected in the associated Method

Blank

B (INORGANICS) Indicates the result is between the RDL and MDL

Sample receipt at GCAL is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of GCAL. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client.

Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with the NELAC standard and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

Robyn Migues
Technical Director
GCAL REPORT 211011920

THIS REPORT CONTAINS _____ PAGES.

Report Sample Summary

GCAL ID Client ID Matrix Collect Date/Time Receive Date/Time

21101192001	N. CONTAINMENT-2	Water	01/18/2011 13:35	01/19/2011 10:30
21101192002	TRIP BLANK	Water	01/18/2011 13:45	01/19/2011 10:30

GCAL Report 211011920

Summary of Compounds Detected

There were no detects

GCAL Report 211011920

GCAL ID
21101192001

Client ID

N. CONTAINMENT-2

Matrix

Water

Collect Date/Time

01/18/2011 13:35

Receive Date/Time

01/19/2011 10:30

SW-846 8260B

Prep Date Prep Batch Prep Method Dilution

1

Analyzed

01/19/2011 12:27

By

RJU

Analytical Batch

449216

CAS# Parameter Result RDL MDL Units

107-06-2

71-43-2

67-66-3

127-18-4

79-01-6

75-01-4

1,2-Dichloroethane

Benzene

Chloroform

Tetrachloroethene

Trichloroethene

Vinyl chloride

5U

5U

5U

5U

5U

5

5

5

5

5

5

5

0.086

0.054

0.057

0.121

0.062

0.093

ug/L

ug/L

ug/L

ug/L

ug/L

ug/L

ug/L

ug/L

CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits

460-00-4
1868-53-7
2037-26-5
17060-07-0
4-Bromofluorobenzene
Dibromofluoromethane
Toluene d8
1,2-Dichloroethane-d4
50
50
50
50
46.4
50.3
48.9
47.5
ug/L
ug/L
ug/L
ug/L
93
101
98
95
78 -130
77 -127
76 -134
71 -127

GCAL Report 211011920

GCAL ID

21101192002

Client ID

TRIP BLANK

Matrix

Water

Collect Date/Time

01/18/2011 13:45

Receive Date/Time

01/19/2011 10:30

SW-846 8260B

Prep Date Prep Batch Prep Method Dilution

1

Analyzed

01/19/2011 11:19

By

RJU

Analytical Batch

449216

CAS# Parameter Result RDL MDL Units

107-06-2

71-43-2

67-66-3

127-18-4

79-01-6

75-01-4

1,2-Dichloroethane

Benzene

Chloroform

Tetrachloroethene

Trichloroethene

Vinyl chloride

5U

5U

5U

5U

5U

5

5

5

5

5

0.086

0.054

0.057

0.121

0.062

0.093

ug/L

ug/L

ug/L

ug/L

ug/L

ug/L

ug/L

ug/L

CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits

460-00-4
1868-53-7
2037-26-5
17060-07-0
4-Bromofluorobenzene
Dibromofluoromethane
Toluene d8
1,2-Dichloroethane-d4
50
50
50
50
46.9
50.4
49.3
48.6
ug/L
ug/L
ug/L
ug/L
94
101
99
97
78 -130
77 -127
76 -134
71 -127

GCAL Report 211011920

GC/MS Volatiles Quality Control Summary

Analytical Batch 449216 Client ID MB449216 LCS449216 LCSD449216
Prep Batch N/A GCAL ID
Sample Type
Analytical Date
Matrix
913959
Method Blank
01/19/2011 10:45
Water
913960
LCS
01/19/2011 07:36
Water
913961
LCSD
01/19/2011 08:16
Water
SW-846 8260B Units
Result
ug/L
RDL
Spike
Added
Result
% R
Control
Limits % R
Result
% R RPD
RPD
Limit
67-66-3 Chloroform 5U 5 50.0 46.9 94 75 -122 44.1 88 6 30
107-06-2 1,2-Dichloroethane 5U 5 50.0 44.4 89 71 -129 42.7 85 4 30
127-18-4 Tetrachloroethene 5U 5 50.0 45.0 90 68 -128 43.8 88 3 30
75-01-4 Vinyl chloride 5U 5 50.0 45.6 91 68 -132 42.9 86 6 30
75-35-4 1,1-Dichloroethene 5U 5 50.0 46.5 93 69 -129 44.2 88 5 20
71-43-2 Benzene 5U 5 50.0 45.5 91 70 -129 44.1 88 3 20
79-01-6 Trichloroethene 5U 5 50.0 44.8 90 76 -129 43.2 86 4 20
108-88-3 Toluene 5U 5 50.0 46.4 93 72 -120 45.2 90 3 20
108-90-7 Chlorobenzene 5U 5 50.0 46.1 92 74 -123 44.9 90 3 20
Surrogate
460-00-4 4-Bromofluorobenzene 46.3 93 50 49.8 100 78 -130 49.2 98
1868-53-7 Dibromofluoromethane 49.5 99 50 50.6 101 77 -127 50.3 101
2037-26-5 Toluene d8 49 98 50 47.3 95 76 -134 47.8 96
17060-07-0 1,2-Dichloroethane-d4 48 96 50 48.5 97 71 -127 48.7 97

Analytical Batch 449216 Client ID B169-ZONE 4-011211-WC 912500MS
912500MSD
Prep Batch N/A GCAL ID
Sample Type
Analytical Date
Matrix
21101140606
SAMPLE

01/19/2011 11:42
Solid
913981
MS
01/19/2011 13:14
Solid
913982
MSD
01/19/2011 13:36
Solid
SW-846 8260B Units ug/L
Result RDL
Spike
Added
Result
% R
Control
Limits % R
Result
% R RPD
RPD
Limit
67-66-3 Chloroform 0.00 200 2000 2080 104 74 -124 1960 98 6 30
107-06-2 1,2-Dichloroethane 0.00 200 2000 1890 95 68 -126 1900 95 0.5 30
127-18-4 Tetrachloroethene 0.00 200 2000 1930 97 70 -127 1900 95 2 30
75-01-4 Vinyl chloride 0.00 200 2000 1900 95 67 -131 1830 92 4 30
75-35-4 1,1-Dichloroethene 0.00 200 2000 1980 99 68 -129 1980 99 0 22
71-43-2 Benzene 0.00 200 2000 2010 101 73 -128 1990 100 1 21
79-01-6 Trichloroethene 0.00 200 2000 1920 96 78 -127 1850 93 4 24
108-90-7 Chlorobenzene 0.00 200 2000 2020 101 75 -121 2000 100 1 21
Surrogate
460-00-4 4-Bromofluorobenzene 2000 1980 99 62 -127 1980 99

GCAL Report 211011920

GC/MS Volatiles Quality Control Summary

Analytical Batch 449216

Prep Batch N/A

Client ID

GCAL ID

Sample Type

Analytical Date

Matrix

B169-ZONE 4-011211-WC

21101140606

SAMPLE

01/19/2011 11:42

Solid

912500MS

913981

MS

01/19/2011 13:14

Solid

912500MSD

913982

MSD

01/19/2011 13:36

Solid

SW-846 8260B Units ug/L

Result RDL

Spike

Added

Result

% R

Control

Limits % R

Result

% R RPD

RPD

Limit

1868-53-7 Dibromofluoromethane 2000 2010 101 65 -130 1990 100

2037-26-5 Toluene d8 2000 1890 95 71 -132 1910 96

17060-07-0 1,2-Dichloroethane-d4 2000 1900 95 62 -125 1890 95

GCAL Report 211011920

NELAP CERTIFICATE NUMBER 01955
DOD ELAP CERTIFICATE NUMBER ADE -1482

ANALYTICAL RESULTS

PERFORMED BY

GULF COAST ANALYTICAL LABORATORIES, INC.
7979 GSRI Avenue
Baton Rouge, LA 70820

Report Date 12/20/2010

GCAL Report 210121016

210121016

Deliver To Columbia Environmental Services, Inc.
13222 Reeveston Road
Houston, TX 77039
713-400-5651
Attn Tony Maag
Project Gulfco Freeport, TX

CASE NARRATIVE

Client: Columbia Environmental Services, Inc. Report: 210121016

Gulf Coast Analytical Laboratories received and analyzed the sample(s) listed

on the sample cross-reference page of this report. Receipt of the sample(s) is documented

by the attached chain of custody. This applies only to the sample(s) listed in this report.

No sample integrity or quality control exceptions were identified unless noted below.

VOLATILES MASS SPECTROMETRY

In the SW-846 1311/8260B analysis, a dilution factor of 40 was performed for sample 21012101601 (SOILS IN BERM AREA). The reporting limits are at or below the regulatory limits at this dilution.

In the SW-846 1311/8260B analysis for analytical batch 447304, the MS/MSD exhibited recovery failures.

All LCS/LCSD recoveries are acceptable.

SEMI-VOLATILES GAS CHROMATOGRAPHY

In the TX1005 analysis for prep batch 447363, the MS/MSD recoveries and RPD are not applicable due to the high concentration of TPH in the spiked sample. The LCS/LCSD recoveries are acceptable.

METALS

In the SW-846 1311/6010B analysis, sample 21012101601 (SOILS IN BERM AREA) was analyzed at a dilution. The reporting limits are at or below the regulatory limits at this dilution.

In the SW-846 1311/6010B analysis for prep batch 447424, the Sample/Duplicate RPD for Cadmium, Chromium, Lead, Selenium and Silver is not applicable because the sample and/or duplicate concentration is less than five times the reporting limit.

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with GCAL's Standard Operating Procedures.

Common Abbreviations Utilized in this Report

ND Indicates the result was Not Detected at the specified RDL

DO Indicates the result was Diluted Out

MI Indicates the result was subject to Matrix Interference

TNTC Indicates the result was Too Numerous To Count

SUBC Indicates the analysis was Sub-Contracted

FLD Indicates the analysis was performed in the Field

PQL Practical Quantitation Limit

MDL Method Detection Limit

RDL Reporting Detection Limit

00:00 Reported as a time equivalent to 12:00 AM

Reporting Flags Utilized in this Report

J Indicates an estimated value

U Indicates the compound was analyzed for but not detected

B (ORGANICS) Indicates the analyte was detected in the associated Method

Blank

B (INORGANICS) Indicates the result is between the RDL and MDL

Sample receipt at GCAL is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of GCAL. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client.

Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with the NELAC standard and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

Robyn Migues
Technical Director
GCAL REPORT 210121016

THIS REPORT CONTAINS _____ PAGES.

Report Sample Summary

GCAL ID Client ID Matrix Collect Date/Time Receive Date/Time

21012101601	SOILS IN BERM AREA	Solid	12/08/2010 15:00	12/10/2010 08:40
21012101602	PCB TRANSFORMER WASH	Water	12/08/2010 15:00	12/10/2010 08:40

GCAL Report 210121016

Summary of Compounds Detected

GCAL ID
21012101601
Client ID
SOILS IN BERM AREA
Matrix
Solid
Collect Date/Time
12/08/2010 15:00
Receive Date/Time
12/10/2010 08:40
SW-846 6010B TCLP
CAS# Parameter Result RDL MDL Units
7440-39-3
7440-43-9
7440-02-0
Barium
Cadmium
Nickel
1.10B
0.0028B
0.0076B
5.00
0.050
0.20
0.00055
0.00055
0.0048
mg/L
mg/L
mg/L
TX1005 Hydrocarbons by Range
CAS# Parameter Result RDL MDL Units
GCSV-05-02
GCSV-05-03
GCSV-05-01
GCSV-05-04
>C12-C28
>C28-C35
C6-C12
Total TPH (C6-C35)
384000
416000
24600J
825000
50000
50000
50000
50000
4350
4350
4450
4350
ug/Kg
ug/Kg

ug/Kg
ug/Kg

GCAL Report 210121016

GCAL ID Client ID Matrix Collect Date/Time Receive Date/Time
21012101601 SOILS IN BERM AREA Solid 12/08/2010 15:00 12/10/2010 08:40
SW-846 8260B TCLP
Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
40 12/12/2010 16:31 BKR 447304
CAS# Parameter Result RDL MDL Units
75-35-4 1,1-Dichloroethene 0.200U 0.200 0.00656 mg/L
107-06-2 1,2-Dichloroethane 0.200U 0.200 0.00344 mg/L
78-93-3 2-Butanone 0.200U 0.200 0.00373 mg/L
71-43-2 Benzene 0.200U 0.200 0.00217 mg/L
56-23-5 Carbon tetrachloride 0.200U 0.200 0.00592 mg/L
108-90-7 Chlorobenzene 0.200U 0.200 0.00110 mg/L
67-66-3 Chloroform 0.200U 0.200 0.00226 mg/L
127-18-4 Tetrachloroethene 0.200U 0.200 0.00484 mg/L
79-01-6 Trichloroethene 0.200U 0.200 0.00247 mg/L
75-01-4 Vinyl chloride 0.200U 0.200 0.00372 mg/L
CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits
460-00-4 4-Bromofluorobenzene 2000 2080 ug/L 104 62 -130
1868-53-7 Dibromofluoromethane 2000 2050 ug/L 103 65 -127
2037-26-5 Toluene d8 2000 2080 ug/L 104 71 -134
17060-07-0 1,2-Dichloroethane-d4 2000 2110 ug/L 106 62 -127
SW-846 8270C TCLP
Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
12/14/2010 08:53 447409 3510C 1 12/14/2010 19:31 JEW 447429
CAS# Parameter Result RDL MDL Units
106-46-7 1,4-Dichlorobenzene 0.0500U 0.0500 0.0006 mg/L
95-95-4 2,4,5-Trichlorophenol 0.0500U 0.0500 0.0006 mg/L
88-06-2 2,4,6-Trichlorophenol 0.0500U 0.0500 0.0008 mg/L
121-14-2 2,4-Dinitrotoluene 0.0500U 0.0500 0.0012 mg/L
1319-77-3 Cresols 0.1000U 0.1000 0.0024 mg/L
118-74-1 Hexachlorobenzene 0.0500U 0.0500 0.0013 mg/L
87-68-3 Hexachlorobutadiene 0.0500U 0.0500 0.0011 mg/L
67-72-1 Hexachloroethane 0.0500U 0.0500 0.0055 mg/L
98-95-3 Nitrobenzene 0.0500U 0.0500 0.0011 mg/L
87-86-5 Pentachlorophenol 0.2500U 0.2500 0.0076 mg/L
110-86-1 Pyridine 0.0500U 0.0500 0.0077 mg/L
1319-77-3MP m,p-Cresol 0.0500U 0.0500 0.0017 mg/L
95-48-7 o-Cresol 0.0500U 0.0500 0.0009 mg/L
CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits
4165-60-0 Nitrobenzene-d5 250 212 ug/L 85 48 -123
321-60-8 2-Fluorobiphenyl 250 213 ug/L 85 16 -128
1718-51-0 Terphenyl-d14 250 189 ug/L 76 38 -167
4165-62-2 Phenol-d5 500 183 ug/L 37 10 -123
367-12-4 2-Fluorophenol 500 271 ug/L 54 10 -120
118-79-6 2,4,6-Tribromophenol 500 370 ug/L 74 44 -121

GCAL Report 210121016

GCAL ID Client ID
21012101601 SOILS IN BERM AREA
TX1005 Hydrocarbons by Range
Prep Date Prep Batch
12/14/2010 11:00 447363
Prep Method
TNRCC 1005
Matrix
Solid
Collect Date/Time
12/08/2010 15:00
Dilution Analyzed
1 12/16/2010 18:18
Receive Date/Time
12/10/2010 08:40
By Analytical Batch
SMH 447615
CAS#
GCSV-05-02
GCSV-05-03
GCSV-05-01
GCSV-05-04
CAS#
84-15-1
Parameter
>C12-C28
>C28-C35
C6-C12
Total TPH (C6-C35)
Surrogate
o-Terphenyl
Conc. Spiked
50000
Result
384000
416000
24600J
825000
Conc. Rec
44500
RDL
50000
50000
50000
50000
Units
ug/Kg
MDL
4350
4350
4450
4350
% Recovery
89
Units
ug/Kg
ug/Kg

ug/Kg
ug/Kg
Rec Limits
58 -148
SW-846 6010B TCLP
Prep Date Prep Batch
12/14/2010 10:35 447424
Prep Method
SW-846 3010A
Dilution
5
Analyzed
12/15/2010 18:09
By
AJW
Analytical Batch
447501
CAS#
7440-36-0
7440-38-2
7440-39-3
7440-43-9
7440-47-3
7440-50-8
7439-92-1
7440-02-0
7782-49-2
7440-22-4
Parameter
Antimony
Arsenic
Barium
Cadmium
Chromium
Copper
Lead
Nickel
Selenium
Silver
Result
0.30U
1.00U
1.10B
0.0028B
0.25U
0.10U
0.50U
0.0076B
0.50U
0.25U
RDL
0.30
1.00
5.00
0.050
0.25
0.10

0.50
0.20
0.50
0.25
MDL
0.020
0.013
0.00055
0.00055
0.0017
0.0069
0.0070
0.0048
0.022
0.0030
Units
mg/L
SW-846 7470A TCLP
Prep Date Prep Batch
12/14/2010 10:35 447425
Prep Method
SW-846 7470A
Dilution
1
Analyzed
12/15/2010 15:04
By
AJW
Analytical Batch
447395
CAS#
7439-97-6
Parameter
Mercury
Result
0.0020U
RDL
0.0020
MDL
0.000081
Units
mg/L
SW-846 9012A Reactivity CN
Prep Date Prep Batch
12/10/2010 14:00 447140
Prep Method
7.3.3.2
Dilution

1
Analyzed
12/10/2010 16:35
By
AEL
Analytical Batch
447274
CAS#
57-12-5R
Parameter
Reactivity Cyanide
Result
250U
RDL
250
MDL
250
Units
mg/kg

GCAL Report 210121016

GCAL ID Client ID
21012101601 SOILS IN BERM AREA
SW-846 9034 Reactivity Sulfide
Prep Date Prep Batch
12/10/2010 14:00 447141
Matrix
Solid
Prep Method
Sec 7.3.4.2
Collect Date/Time
12/08/2010 15:00
Dilution Analyzed
1 12/13/2010 11:25
Receive Date/Time
12/10/2010 08:40
By Analytical Batch
JEM 447342
CAS#
18496-25-8R
Parameter
Reactivity Sulfide
Result
80U
RDL
80
MDL
80
Units
mg/kg
RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL Report 210121016

GCAL ID Client ID Matrix Collect Date/Time Receive Date/Time
21012101602 PCB TRANSFORMER WASH WATER Water 12/08/2010 15:00 12/10/2010
08:40
SW-846 8082A
Prep Date Prep Batch Prep Method Dilution Analytical Batch
12/15/2010 10:55 447353 3510C 1 12/15/2010 21:00 TLS 447536
CAS# Parameter Result RDL MDL Units
12674-11-2 Aroclor-1016 1.28U 1.28 0.431 ug/L
11104-28-2 Aroclor-1221 1.28U 1.28 0.285 ug/L
11141-16-5 Aroclor-1232 1.28U 1.28 0.129 ug/L
53469-21-9 Aroclor-1242 1.28U 1.28 0.217 ug/L
12672-29-6 Aroclor-1248 1.28U 1.28 0.131 ug/L
11097-69-1 Aroclor-1254 1.28U 1.28 0.110 ug/L
11096-82-5 Aroclor-1260 1.28U 1.28 0.338 ug/L
CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits
2051-24-3 Decachlorobiphenyl .641 .194 ug/L 30 30 -139

GCAL Report 210121016

GC/MS Volatiles Quality Control Summary

Analytical Batch 447304 Client ID MB447304 LCS447304 LCSD447304
Prep Batch N/A GCAL ID
Sample Type
Analytical Date
Matrix
904859
Method Blank
12/12/2010 15:21
Water
904860
LCS
12/12/2010 14:10
Water
904861
LCSD
12/12/2010 14:37
Water
SW-846 8260B TCLP Units
Result
mg/L
RDL
Spike
Added
Result
% R
Control
Limits % R
Result
% R RPD
RPD
Limit
56-23-5 Carbon tetrachloride 0.00500U 0.00500 0.050 0.057 114 76 -128
0.056 111 2 30
67-66-3 Chloroform 0.00500U 0.00500 0.050 0.053 106 75 -122 0.052 103 2
30
107-06-2 1,2-Dichloroethane 0.00500U 0.00500 0.050 0.050 100 71 -129
0.050 101 0 30
78-93-3 2-Butanone 0.00500U 0.00500 0.050 0.039 79 58 -137 0.046 91 16 30
127-18-4 Tetrachloroethene 0.00500U 0.00500 0.050 0.051 101 68 -128 0.049
97 4 30
75-01-4 Vinyl chloride 0.00500U 0.00500 0.050 0.047 94 68 -132 0.044 88 7
30
75-35-4 1,1-Dichloroethene 0.00500U 0.00500 0.050 0.052 105 69 -129 0.050
99 4 20
71-43-2 Benzene 0.00500U 0.00500 0.050 0.050 100 70 -129 0.048 96 4 20
79-01-6 Trichloroethene 0.00500U 0.00500 0.050 0.055 109 76 -129 0.050
101 10 20
108-90-7 Chlorobenzene 0.00500U 0.00500 0.050 0.048 97 74 -123 0.048 96 0
20
Surrogate
460-00-4 4-Bromofluorobenzene 50.5 101 50 51.5 103 62 -130 51.7 103
1868-53-7 Dibromofluoromethane 52.2 104 50 54.5 109 65 -127 53.1 106
2037-26-5 Toluene d8 52.1 104 50 48.1 96 71 -134 48.2 96
17060-07-0 1,2-Dichloroethane-d4 52.8 106 50 53 106 62 -127 51.9 104

Analytical Batch 447304 Client ID SOILS IN BERM AREA 904485MS 904485MSD
Prep Batch N/A GCAL ID
Sample Type
Analytical Date
Matrix
21012101601
SAMPLE
12/12/2010 16:31
Solid
904862
MS
12/12/2010 17:59
Solid
904863
MSD
12/12/2010 18:21
Solid
SW-846 8260B TCLP Units
Result
mg/L
RDL
Spike
Added
Result
% R
Control
Limits % R
Result
% R RPD
RPD
Limit
56-23-5 Carbon tetrachloride 0.00 0.200 2.00 2.26 113 76 -128 2.15 108 5
30
67-66-3 Chloroform 0.00 0.200 2.00 2.17 109 75 -122 2.05 103 6 30
107-06-2 1,2-Dichloroethane 0.00 0.200 2.00 2.01 101 71 -129 1.97 99 2 30
78-93-3 2-Butanone 0.00 0.200 2.00 1.60 80 58 -137 1.64 82 2 30
127-18-4 Tetrachloroethene 0.00 0.200 2.00 2.05 103 68 -128 1.91 96 7 30
75-01-4 Vinyl chloride 0.00 0.200 2.00 0.501 25* 68 -132 0.494 25* 1 30
75-35-4 1,1-Dichloroethene 0.00 0.200 2.00 1.68 84 69 -129 1.56 78 7 30
71-43-2 Benzene 0.00 0.200 2.00 1.99 100 70 -129 1.89 95 5 30
79-01-6 Trichloroethene 0.00 0.200 2.00 2.12 106 76 -129 2.03 102 4 30

GCAL Report 210121016

GC/MS Volatiles Quality Control Summary

Analytical Batch 447304

Prep Batch N/A

Client ID

GCAL ID

Sample Type

Analytical Date

Matrix

SOILS IN BERM AREA

21012101601

SAMPLE

12/12/2010 16:31

Solid

904485MS

904862

MS

12/12/2010 17:59

Solid

904485MSD

904863

MSD

12/12/2010 18:21

Solid

SW-846 8260B TCLP Units

Result

mg/L

RDL

Spike

Added

Result

% R

Control

Limits % R

Result

% R RPD

RPD

Limit

108-90-7 Chlorobenzene 0.00 0.200 2.00 1.97 99 74 -123 1.90 95 4 30

Surrogate

460-00-4 4-Bromofluorobenzene 2080 104 2000 2070 104 62 -130 2060 103

1868-53-7 Dibromofluoromethane 2050 103 2000 2100 105 65 -127 2050 103

2037-26-5 Toluene d8 2080 104 2000 1940 97 71 -134 1940 97

17060-07-0 1,2-Dichloroethane-d4 2110 106 2000 2080 104 62 -127 2050 103

GCAL Report 210121016

GC/MS Semi-Volatiles Quality Control Summary

Analytical Batch 447429 Client ID MB447409 LCS447409 LCSD447409
Prep Batch 447409 GCAL ID 905357 905358 905359
Prep Method 3510C Sample Type
Prep Date
Analytical Date
Matrix
Method Blank
12/14/2010 08:53
12/14/2010 17:00
Water
LCS
12/14/2010 08:53
12/14/2010 17:15
Water
LCSD
12/14/2010 08:53
12/14/2010 17:31
Water
SW-846 8270C TCLP Units
Result
mg/L
RDL
Spike
Added
Result
% R
Control
Limits % R
Result
% R RPD
RPD
Limit
118-74-1 Hexachlorobenzene 0.0500U 0.0500 0.100 0.069 69 61 -120 0.069 69
0 30
87-68-3 Hexachlorobutadiene 0.0500U 0.0500 0.100 0.066 66 17 -120 0.067
67 2 30
67-72-1 Hexachloroethane 0.0500U 0.0500 0.100 0.062 62 21 -120 0.065 65 5
30
95-48-7 o-Cresol 0.0500U 0.0500 0.100 0.053 53 31 -125 0.055 55 4 30
98-95-3 Nitrobenzene 0.0500U 0.0500 0.100 0.069 69 53 -120 0.069 69 0 30
95-95-4 2,4,5-Trichlorophenol 0.0500U 0.0500 0.100 0.066 66 60 -120 0.067
67 2 30
88-06-2 2,4,6-Trichlorophenol 0.0500U 0.0500 0.100 0.063 63 59 -120 0.066
66 5 30
110-86-1 Pyridine 0.0500U 0.0500 0.100 0.037 37 10 -120 0.040 40 8 30
1319-77-3 Cresols 0.1000U 0.1000 0.200 0.098 49 24 -125 0.101 51 3 30
1319-77-3MP m,p-Cresol 0.0500U 0.0500 0.100 0.043 43 24 -125 0.045 45 5
30
106-46-7 1,4-Dichlorobenzene 0.0500U 0.0500 0.100 0.066 66 22 -120 0.068
68 3 30
121-14-2 2,4-Dinitrotoluene 0.0500U 0.0500 0.100 0.066 66 37 -138 0.068
68 3 30
87-86-5 Pentachlorophenol 0.2500U 0.2500 0.100 0.058 58 25 -158 0.057 57
2 30

Surrogate
4165-60-0 Nitrobenzene-d5 35.7 71 50 39.9 80 48 -123 41.2 82
321-60-8 2-Fluorobiphenyl 36.7 73 50 42 84 16 -128 44.2 88
1718-51-0 Terphenyl-d14 38.3 77 50 40.8 82 38 -167 41.9 84
4165-62-2 Phenol-d5 33 33 100 36.5 37 10 -123 38.1 38
367-12-4 2-Fluorophenol 47 47 100 54.6 55 10 -120 56.2 56
118-79-6 2,4,6-Tribromophenol 58.9 59 100 68.6 69 44 -121 72 72

Analytical Batch 447429
Prep Batch 447409
Prep Method 3510C
Client ID
GCAL ID
Sample Type
Prep Date
Analytical Date
Matrix
SOILS IN BERM AREA
21012101601
SAMPLE
12/14/2010 08:53
12/14/2010 19:31
Solid
904485MS
905500
MS
12/14/2010 08:53
12/14/2010 19:46
Solid
904485MSD
905501
MSD
12/14/2010 08:53
12/14/2010 20:01
Solid
SW-846 8270C TCLP Units
Result
mg/L
RDL
Spike
Added
Result
% R
Control
Limits % R
Result
% R RPD
RPD
Limit
118-74-1 Hexachlorobenzene 0.00 0.0500 0.500 0.345 69 61 -120 0.381 76 10
30
87-68-3 Hexachlorobutadiene 0.00 0.0500 0.500 0.323 65 17 -120 0.344 69 6
30

GCAL Report 210121016

GC/MS Semi-Volatiles Quality Control Summary

Analytical Batch 447429 Client ID SOILS IN BERM AREA 904485MS 904485MSD
Prep Batch 447409 GCAL ID 21012101601 905500 905501
Prep Method 3510C Sample Type
Prep Date
Analytical Date
Matrix
SAMPLE
12/14/2010 08:53
12/14/2010 19:31
Solid
MS
12/14/2010 08:53
12/14/2010 19:46
Solid
MSD
12/14/2010 08:53
12/14/2010 20:01
Solid
SW-846 8270C TCLP Units
Result
mg/L
RDL
Spike
Added
Result
% R
Control
Limits % R
Result
% R RPD
RPD
Limit
67-72-1 Hexachloroethane 0.00 0.0500 0.500 0.334 67 21 -120 0.354 71 6 30
95-48-7 o-Cresol 0.00 0.0500 0.500 0.271 54 31 -125 0.304 61 11 30
98-95-3 Nitrobenzene 0.00 0.0500 0.500 0.357 71 53 -120 0.380 76 6 30
95-95-4 2,4,5-Trichlorophenol 0.00 0.0500 0.500 0.348 70 60 -120 0.378 76
8 30
88-06-2 2,4,6-Trichlorophenol 0.00 0.0500 0.500 0.332 66 59 -120 0.358 72
8 30
110-86-1 Pyridine 0.00 0.0500 0.500 0.242 48 10 -120 0.250 50 3 30
1319-77-3 Cresols 0.00 0.1000 1.00 0.511 51 24 -125 0.574 57 12 30
1319-77-3MP m,p-Cresol 0.00 0.0500 0.500 0.232 46 24 -125 0.263 53 13 30
106-46-7 1,4-Dichlorobenzene 0.00 0.0500 0.500 0.337 67 22 -120 0.356 71
5 30
121-14-2 2,4-Dinitrotoluene 0.00 0.0500 0.500 0.373 75 37 -138 0.393 79 5
30
87-86-5 Pentachlorophenol 0.00 0.2500 0.500 0.316 63 25 -158 0.339 68 7
30
Surrogate
4165-60-0 Nitrobenzene-d5 212 85 250 208 83 48 -123 201 80
321-60-8 2-Fluorobiphenyl 213 85 250 216 86 16 -128 210 84
1718-51-0 Terphenyl-d14 189 76 250 197 79 38 -167 195 78
4165-62-2 Phenol-d5 183 37 500 186 37 10 -123 179 36
367-12-4 2-Fluorophenol 271 54 500 269 54 10 -120 263 53

118-79-6 2,4,6-Tribromophenol 370 74 500 382 76 44 -121 351 70

GCAL Report 210121016

General Chromatography Quality Control Summary

Analytical Batch 447536 Client ID MB447353 LCS447353 LCSD447353
Prep Batch 447353 GCAL ID 905060 905061 905062
Prep Method 3510C Sample Type
Prep Date
Analytical Date
Matrix
Method Blank
12/15/2010 10:55
12/15/2010 20:05
Water
LCS
12/15/2010 10:55
12/15/2010 20:23
Water
LCSD
12/15/2010 10:55
12/15/2010 20:42
Water
SW-846 8082A Units
Result
ug/L
RDL
Spike
Added
Result
% R
Control
Limits % R
Result
% R RPD
RPD
Limit
11104-28-2 Aroclor-1221 1.00U 1.00
11141-16-5 Aroclor-1232 1.00U 1.00
53469-21-9 Aroclor-1242 1.00U 1.00
12672-29-6 Aroclor-1248 1.00U 1.00
11097-69-1 Aroclor-1254 1.00U 1.00
12674-11-2 Aroclor-1016 1.00U 1.00 4.00 3.65 91 57 -130 4.13 103 12 35
11096-82-5 Aroclor-1260 1.00U 1.00 4.00 3.64 91 55 -130 4.05 101 11 34
Surrogate
2051-24-3 Decachlorobiphenyl .336 67 .5 .351 70 30 -139 .319 64

GCAL Report 210121016

General Chromatography Quality Control Summary

Analytical Batch 447615
Prep Batch 447363
Prep Method TNRCC 1005
Client ID
GCAL ID
Sample Type
Prep Date
Analytical Date
Matrix
MB447363
905166
Method Blank
12/14/2010 11:00
12/16/2010 14:46
Solid
LCS447363
905167
LCS
12/14/2010 11:00
12/16/2010 15:20
Solid
LCSD447363
905168
LCSD
12/14/2010 11:00
12/16/2010 15:56
Solid
TX1005 Hydrocarbons by Range Units
Result
ug/Kg
RDL
Spike
Added
Result
% R
Control
Limits % R
Result
% R RPD
RPD
Limit
GCSV-05-01 C6-C12 50000U 50000
GCSV-05-02 >C12-C28 50000U 50000
GCSV-05-03 >C28-C35 50000U 50000
GCSV-05-04 Total TPH (C6-C35) 50000U 50000 198000 190000 96 75 -125
182000 91 4 20
Surrogate
84-15-1 o-Terphenyl 40800 82 49500 49000 99 58 -148 40200 80

Analytical Batch 447615
Prep Batch 447363
Prep Method TNRCC 1005
Client ID
GCAL ID

Sample Type
Prep Date
Analytical Date
Matrix
SOILS IN BERM AREA
21012101601
SAMPLE
12/14/2010 11:00
12/16/2010 18:18
Solid
904485MS
905169
MS
12/14/2010 11:00
12/16/2010 18:54
Solid
904485MSD
905170
MSD
12/14/2010 11:00
12/16/2010 19:28
Solid
TX1005 Hydrocarbons by Range Units ug/Kg
Result RDL
Spike
Added
Result
% R
Control
Limits % R
Result
% R RPD
RPD
Limit
GCSV-05-04 Total TPH (C6-C35) 825000 50000 200000 1390000 284* 75 -125
1090000 132* 24* 20
Surrogate
84-15-1 o-Terphenyl 44500 89 50000 42400 85 58 -148 42700 85

GCAL Report 210121016

Inorganics Quality Control Summary

Analytical Batch 447501
Prep Batch 447424
Prep Method SW-846
3010A
Client ID
GCAL ID
Sample Type
Prep Date
Analytical Date
Matrix
MB447424
905406
Method Blank
12/14/2010 10:35
12/15/2010 16:42
Water
LCS447424
905407
LCS
12/14/2010 10:35
12/15/2010 16:49
Water
SW-846 6010B TCLP Units mg/L
Result RDL
Spike
Added
Result
% R
Control
Limits % R
7440-36-0 Antimony 0.060U 0.060 0.50 0.49 99 80 -120
7440-38-2 Arsenic 0.20U 0.20 0.50 0.51 102 80 -120
7440-39-3 Barium 0.081B 1.00 0.50 0.57 115 80 -120
7440-43-9 Cadmium 0.00028B 0.010 0.50 0.49 99 80 -120
7440-47-3 Chromium 0.0019B 0.050 0.50 0.47 95 80 -120
7440-50-8 Copper 0.0035B 0.020 0.50 0.51 102 80 -120
7439-92-1 Lead 0.0059B 0.10 0.50 0.49 98 80 -120
7440-02-0 Nickel 0.0021B 0.040 0.50 0.47 95 80 -120
7782-49-2 Selenium 0.015B 0.10 0.50 0.56 111 80 -120
7440-22-4 Silver 0.0017B 0.050 0.50 0.49 98 80 -120

Analytical Batch 447501
Prep Batch 447424
Prep Method SW-846
3010A
Client ID
GCAL ID
Sample Type
Prep Date
Analytical Date
Matrix
HAZ BARGE CLEANING SOLIDS
21012131101
SAMPLE

12/14/2010 10:35
12/15/2010 16:56
Solid
905123MS
905409
MS
12/14/2010 10:35
12/15/2010 17:10
Solid
SW-846 6010B TCLP Units mg/L
Result RDL
Spike
Added
Result
% R
Control
Limits % R
7440-36-0 Antimony 0.0 0.30 0.50 0.48 97 75 -125
7440-38-2 Arsenic 0.0 1.00 0.50 0.50 101 75 -125
7440-39-3 Barium 0.44 5.00 0.50 0.96 102 75 -125
7440-43-9 Cadmium 0.0010 0.050 0.50 0.51 101 75 -125
7440-47-3 Chromium 0.0 0.25 0.50 0.50 100 75 -125
7440-50-8 Copper 0.0 0.10 0.50 0.52 103 75 -125
7439-92-1 Lead 0.015 0.50 0.50 0.51 99 75 -125
7440-02-0 Nickel 0.37 0.20 0.50 0.89 104 75 -125
7782-49-2 Selenium 0.0095 0.50 0.50 0.51 100 75 -125
7440-22-4 Silver 0.0072 0.25 0.50 0.50 98 75 -125

GCAL Report 210121016

Inorganics Quality Control Summary

Analytical Batch 447501

Prep Batch 447424

Prep Method SW-846

3010A

Client ID

GCAL ID

Sample Type

Prep Date

Analytical Date

Matrix

HAZ BARGE CLEANING SOLIDS

21012131101

SAMPLE

12/14/2010 10:35

12/15/2010 16:56

Solid

905123DUP

905408

DUP

12/14/2010 10:35

12/15/2010 17:03

Solid

SW-846 6010B TCLP Units mg/L

Result RDL

Result

RPD

RPD

Limit

7440-36-0 Antimony 0.0 0.30 0.0 0 20

7440-38-2 Arsenic 0.0 1.00 0.0 0 20

7440-39-3 Barium 0.44 5.00 0.46 4 20

7440-43-9 Cadmium 0.0010 0.050 0.00012 157* 20

7440-47-3 Chromium 0.0 0.25 0.0027 200* 20

7440-50-8 Copper 0.0 0.10 0.0 0 20

7439-92-1 Lead 0.015 0.50 0.0059 87* 20

7440-02-0 Nickel 0.37 0.20 0.39 5 20

7782-49-2 Selenium 0.0095 0.50 0.0 200* 20

7440-22-4 Silver 0.0072 0.25 0.0023 103* 20

GCAL Report 210121016

Inorganics Quality Control Summary

Analytical Batch 447395
Prep Batch 447425
Prep Method SW-846
7470A
Client ID
GCAL ID
Sample Type
Prep Date
Analytical Date
Matrix
MB447425
905411
Method Blank
12/14/2010 10:35
12/15/2010 14:47
Water
LCS447425
905412
LCS
12/14/2010 10:35
12/15/2010 14:52
Water
SW-846 7470A TCLP Units
Result
mg/L
RDL
Spike
Added
Result
% R
Control
Limits % R
7439-97-6 Mercury 0.0020U 0.0020 0.00500 0.00512 102 80 -120

Analytical Batch 447395
Prep Batch 447425
Prep Method SW-846
7470A
Client ID
GCAL ID
Sample Type
Prep Date
Analytical Date
Matrix
HAZ BARGE CLEANING SOLIDS
21012131101
SAMPLE
12/14/2010 10:35
12/15/2010 14:53
Solid
905123MS
905414
MS
12/14/2010 10:35

12/15/2010 14:56

Solid

SW-846 7470A TCLP Units mg/L

Result RDL

Spike

Added

Result

% R

Control

Limits % R

7439-97-6 Mercury 0.00000 0.0020 0.00500 0.00532 106 75 -125

Analytical Batch 447395

Prep Batch 447425

Prep Method SW-846

7470A

Client ID

GCAL ID

Sample Type

Prep Date

Analytical Date

Matrix

HAZ BARGE CLEANING SOLIDS

21012131101

SAMPLE

12/14/2010 10:35

12/15/2010 14:53

Solid

905123DUP

905413

DUP

12/14/2010 10:35

12/15/2010 14:55

Solid

SW-846 7470A TCLP Units mg/L

Result RDL

Result

RPD

RPD

Limit

7439-97-6 Mercury 0.00000 0.0020 0.00000 0 20

GCAL Report 210121016

General Chemistry Quality Control Summary

Analytical Batch 447274
Prep Batch 447140
Prep Method 7.3.3.2
Client ID
GCAL ID
Sample Type
Prep Date
Analytical Date
Matrix
MB447140
903952
Method Blank
12/10/2010 14:00
12/10/2010 16:25
Solid
LCS447140
903953
LCS
12/10/2010 14:00
12/10/2010 16:26
Solid
SW-846 9012A Reactivity CN Units
Result
mg/kg
RDL
Spike
Added
Result
% R
Control
Limits % R
57-12-5R Reactivity Cyanide 250U 250 250 25.6 10 1 -25

Analytical Batch 447274
Prep Batch 447140
Prep Method 7.3.3.2
Client ID
GCAL ID
Sample Type
Prep Date
Analytical Date
Matrix
GPT-120710-PM-001
21012084002
SAMPLE
12/10/2010 14:00
12/10/2010 16:33
Solid
903884DUP
903954
DUP
12/10/2010 14:00
12/10/2010 16:34
Solid

SW-846 9012A Reactivity CN Units
Result
mg/kg
RDL
Result
RPD
RPD
Limit
57-12-5R Reactivity Cyanide 0.0000 250 0.0000 0 25

GCAL Report 210121016

General Chemistry Quality Control Summary

Analytical Batch 447342
Prep Batch 447141
Prep Method Sec 7.3.4.2
Client ID
GCAL ID
Sample Type
Prep Date
Analytical Date
Matrix
MB447141
903955
Method Blank
12/10/2010 14:00
12/13/2010 11:25
Solid
LCS447141
903956
LCS
12/10/2010 14:00
12/13/2010 11:25
Solid
SW-846 9034 Reactivity Sulfide Units
Result
mg/kg
RDL
Spike
Added
Result
% R
Control
Limits % R
18496-25-8R Reactivity Sulfide 80U 80 537 417 77.7 20 -114

Analytical Batch 447342
Prep Batch 447141
Prep Method Sec 7.3.4.2
Client ID
GCAL ID
Sample Type
Prep Date
Analytical Date
Matrix
GPT-120710-PM-001
21012084002
SAMPLE
12/10/2010 14:00
12/13/2010 11:25
Solid
903884DUP
903957
DUP
12/10/2010 14:00
12/13/2010 11:25
Solid

SW-846 9034 Reactivity Sulfide Units
Result
mg/kg
RDL
Result
RPD
RPD
Limit
18496-25-8R Reactivity Sulfide 0 80 0 0 25

GCAL Report 210121016

NELAP CERTIFICATE NUMBER 01955

ANALYTICAL RESULTS

PERFORMED BY

GULF COAST ANALYTICAL LABORATORIES, INC.

Report Date 04/28/2010
GCAL Report 210041229

210041229

Deliver To Columbia Environmental Services, Inc.
13222 Reeveston Road
Houston, TX 77039
713-400-5651
Attn Tony Maag
Project Gulfco Marine

CASE NARRATIVE

Client: Columbia Environmental Services, Inc Report: 210041229

Gulf Coast Analytical Laboratories received and analyzed the sample(s) listed

on the sample cross-reference page of this report. Receipt of the sample(s) is documented

by the attached chain of custody. This applies only to the sample(s) listed in this report.

No sample integrity or quality control exceptions were identified unless noted below.

VOLATILES MASS SPECTROMETRY

In the SW-846 1311/8260B analysis, samples 21004122901 (T2), 21004122903 (T6), 21004122904 (T6

MS), 21004122905 (T6 MSD), 21004122906 (T13), 21004122909 (T18), 21004122910 (T19), and

21004122911 (T21) had to be diluted to bracket the concentration of target compounds within the calibration

range of the instrument. The dilutions are reflected in elevated reporting limits that have been lowered when

necessary to meet the regulatory limit. The reporting limit exceeds the regulatory limit for vinyl chloride for sample 21004122911 (T21).

In the SW-846 1311/8260B analysis, a dilution factor of 40 was performed for samples 21004122902 (T4), 21004122907 (T15), 21004122908 (T16) and 21004122912 (T22). The reporting limits are at or below the regulatory limits at this dilution.

In the SW-846 1311/8260B analysis for analytical batch 429573, the MS/MSD exhibited recovery failures.

All LCS/LCSD recoveries and RPDs are acceptable.

SEMI-VOLATILES GAS CHROMATOGRAPHY

In the TX 1005 analysis, sample 21004122908 (T16) had to be diluted to bracket target ranges within the calibration range of the instrument. This is reflected in elevated detection limits. The recovery for the surrogate is above the upper control limit. This can be attributed to a matrix interference as the surrogate eluted within the diesel "hump" of the chromatogram.

CONVENTIONALS

The Flashpoint analysis for samples 21004122907 (T15), 21004122909 (T18), 21004122910 (T19), and 21004122912 (T22) was performed by SW-846 Method 1010. The matrix is identified as a solid; while solid samples do not fall within the scope of this method, these samples are liquids.

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with GCAL's Standard Operating Procedures.

Common Abbreviations Utilized in this Report

ND Indicates the result was Not Detected at the specified RDL

DO Indicates the result was Diluted Out

MI Indicates the result was subject to Matrix Interference

TNTC Indicates the result was Too Numerous To Count

SUBC Indicates the analysis was Sub-Contracted

FLD Indicates the analysis was performed in the Field

PQL Practical Quantitation Limit

MDL Method Detection Limit

RDL Reporting Detection Limit

00:00 Reported as a time equivalent to 12:00 AM

Reporting Flags Utilized in this Report

J Indicates an estimated value

U Indicates the compound was analyzed for but not detected

B (ORGANICS) Indicates the analyte was detected in the associated Method

Blank

B (INORGANICS) Indicates the result is between the RDL and MDL

Sample receipt at GCAL is documented through the attached chain of custody. In accordance with ISO

Guide 25 and NELAC, this report shall be reproduced only in full and with the written permission of GCAL.

The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client.

Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with the NELAC standard and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Robyn Migues
Technical Director
GCAL REPORT 210041229

THIS REPORT CONTAINS _____ PAGES.

Report Sample Summary

GCAL ID Client ID Matrix Collect Date/Time Receive Date/Time

21004122901	T2	Water	04/06/2010	12:00	04/09/2010	12:06
21004122902	T4	Water	04/06/2010	15:00	04/09/2010	12:06
21004122903	T6	Water	04/06/2010	16:00	04/09/2010	12:06
21004122904	T6	MS Water	04/06/2010	16:00	04/09/2010	12:06
21004122905	T6	MSD Water	04/06/2010	16:00	04/09/2010	12:06
21004122906	T13	Solid	04/07/2010	11:00	04/09/2010	12:06
21004122907	T15	Solid	04/07/2010	16:00	04/09/2010	12:06
21004122908	T16	Water	04/07/2010	12:00	04/09/2010	12:06
21004122909	T18	Solid	04/07/2010	10:00	04/09/2010	12:06
21004122910	T19	Solid	04/07/2010	13:00	04/09/2010	12:06
21004122911	T21	Water	04/07/2010	15:00	04/09/2010	12:06
21004122912	T22	Solid	04/07/2010	10:15	04/09/2010	12:06

GCAL Report 210041229

Summary of Compounds Detected

GCAL ID Client ID
21004122901 T2
SW-846 8260B TCLP
CAS# Parameter
107-06-2 1,2-Dichloroethane
78-93-3 2-Butanone
71-43-2 Benzene
67-66-3 Chloroform
127-18-4 Tetrachloroethene
79-01-6 Trichloroethene
Matrix
Water
Collect Date/Time
04/06/2010 12:00
Result
28.9
5.64
2.43
1.25
0.534
12.7
RDL
0.200
5.00
0.200
1.00
0.200
0.200
Receive Date/Time
04/09/2010 12:06
MDL
0.017
0.019
0.011
0.011
0.024
0.012
Units
mg/L
mg/L
mg/L
mg/L
mg/L
mg/L
SW-846 6010B TCLP
CAS# Parameter
7440-38-2 Arsenic
7440-39-3 Barium
7440-47-3 Chromium
7782-49-2 Selenium
Result
0.020B
16.8
0.013B

0.0061B
RDL
0.20
1.00
0.050
0.10
MDL
0.0030
0.00031
0.00032
0.0037
Units
mg/L
mg/L
mg/L
mg/L
SW-846 7470A TCLP
CAS# Parameter
7439-97-6 Mercury
Result
0.00067B
RDL
0.020
MDL
0.00055
Units
mg/L
GCAL ID Client ID
21004122902 T4
SW-846 6010B TCLP
CAS# Parameter
7440-36-0 Antimony
7440-38-2 Arsenic
7440-39-3 Barium
7440-02-0 Nickel
Matrix
Water
Collect Date/Time
04/06/2010 15:00
Result
0.020B
0.0030B
13.1
0.038B
RDL
0.060
0.20
1.00
0.040
Receive Date/Time
04/09/2010 12:06
MDL
0.0035
0.0030
0.00031
0.0012
Units

mg/L
mg/L
mg/L
mg/L
GCAL ID Client ID
21004122903 T6
SW-846 8260B TCLP
CAS# Parameter
107-06-2 1,2-Dichloroethane
71-43-2 Benzene
67-66-3 Chloroform
79-01-6 Trichloroethene
Matrix
Water
Collect Date/Time
04/06/2010 16:00
Result
6.91
0.802
5.36
0.245J
RDL
0.500
0.500
0.500
0.500
Receive Date/Time
04/09/2010 12:06
MDL
0.00860
0.00542
0.00565
0.00618
Units
mg/L
mg/L
mg/L
mg/L

GCAL Report 210041229

Summary of Compounds Detected (con't)

GCAL ID Client ID
21004122903 T6
SW-846 8270C TCLP
CAS# Parameter
1319-77-3 Cresols
1319-77-3MP m,p-Cresol
95-48-7 o-Cresol
Matrix
Water
Collect Date/Time
04/06/2010 16:00
Result
0.027J
0.012J
0.016J
RDL
0.1000
0.0500
0.0500
Receive Date/Time
04/09/2010 12:06
MDL
0.0024
0.0017
0.0009
Units
mg/L
mg/L
mg/L
SW-846 6010B TCLP
CAS# Parameter
7440-38-2 Arsenic
7440-39-3 Barium
7440-43-9 Cadmium
7440-47-3 Chromium
7439-92-1 Lead
7440-02-0 Nickel
Result
0.016B
2.42
0.0058B
0.0021B
0.013B
0.50
RDL
0.20
1.00
0.010
0.050
0.10
0.040
MDL
0.0030
0.00031

0.00016
0.00032
0.0015
0.0012
Units
mg/L
mg/L
mg/L
mg/L
mg/L
mg/L
mg/L
SW-846 7470A TCLP
CAS# Parameter
7439-97-6 Mercury
Result
0.00011B
RDL
0.0020
MDL
0.000055
Units
mg/L
GCAL ID Client ID
21004122904 T6 MS
SW-846 8270C TCLP
CAS# Parameter
106-46-7 1,4-Dichlorobenzene
121-14-2 2,4-Dinitrotoluene
1319-77-3 Cresols
87-86-5 Pentachlorophenol
1319-77-3MP m,p-Cresol
95-48-7 o-Cresol
Matrix
Water
Collect Date/Time
04/06/2010 16:00
Result
0.414
0.527
0.031J
0.403
0.013J
0.018J
RDL
0.0500
0.0500
0.1000
0.2500
0.0500
0.0500
Receive Date/Time
04/09/2010 12:06
MDL
0.0006
0.0012
0.0024
0.0076

0.0017
0.0009
Units
mg/L
mg/L
mg/L
mg/L
mg/L
mg/L
mg/L
mg/L
SW-846 6010B TCLP
CAS# Parameter
7440-36-0 Antimony
7440-38-2 Arsenic
7440-39-3 Barium
7440-41-7 Beryllium
7440-43-9 Cadmium
7440-47-3 Chromium
7439-92-1 Lead
7440-02-0 Nickel
7782-49-2 Selenium
Result
0.47
0.53
2.82
0.49
0.49
0.49
0.49
0.96
0.50
RDL
0.060
0.20
1.00
0.0050
0.010
0.050
0.10
0.040
0.10
MDL
0.0035
0.0030
0.00031
0.000068
0.00016
0.00032
0.0015
0.0012
0.0037
Units
mg/L
mg/L
mg/L
mg/L
mg/L
mg/L

mg/L

mg/L

mg/L

GCAL Report 210041229

Summary of Compounds Detected (con't)

GCAL ID Client ID
21004122904 T6 MS
SW-846 6010B TCLP
CAS# Parameter
7440-22-4 Silver
Matrix
Water
Collect Date/Time
04/06/2010 16:00
Result
0.49
RDL
0.050
Receive Date/Time
04/09/2010 12:06
MDL
0.00058
Units
mg/L
SW-846 7470A TCLP
CAS# Parameter
7439-97-6 Mercury
Result
0.00527
RDL
0.0020
MDL
0.000055
Units
mg/L
TX1005 Hydrocarbons by Range
CAS# Parameter
GCSV-05-02 >C12-C28
GCSV-05-01 C6-C12
GCSV-05-04 Total TPH (C6-C35)
Result
26900
24700
51600
RDL
150
150
150
MDL
130
112
112
Units
ug/L
ug/L
ug/L
SW-846 8260B TCLP
CAS# Parameter
75-35-4 1,1-Dichloroethene

107-06-2 1,2-Dichloroethane
78-93-3 2-Butanone
71-43-2 Benzene
56-23-5 Carbon tetrachloride
108-90-7 Chlorobenzene
67-66-3 Chloroform
127-18-4 Tetrachloroethene
79-01-6 Trichloroethene
75-01-4 Vinyl chloride
Result
4.26
10.6
3.58
5.24
4.24
4.40
8.71
4.64
4.57
4.37
RDL
0.500
0.500
2.50
0.500
0.500
0.500
0.500
0.500
0.500
MDL
0.016
0.00860
0.00933
0.00542
0.015
0.00274
0.00565
0.012
0.00618
0.00930
Units
mg/L
mg/L
mg/L
mg/L
mg/L
mg/L
mg/L
mg/L
mg/L
GCAL ID Client ID
21004122905 T6 MSD
SW-846 8270C TCLP
CAS# Parameter

106-46-7 1,4-Dichlorobenzene
121-14-2 2,4-Dinitrotoluene
1319-77-3 Cresols
87-86-5 Pentachlorophenol
1319-77-3MP m,p-Cresol
95-48-7 o-Cresol
Matrix
Water
Collect Date/Time
04/06/2010 16:00
Result
0.470
0.527
0.034J
0.424
0.014J
0.020J
RDL
0.0500
0.0500
0.1000
0.2500
0.0500
0.0500
Receive Date/Time
04/09/2010 12:06
MDL
0.0006
0.0012
0.0024
0.0076
0.0017
0.0009
Units
mg/L
mg/L
mg/L
mg/L
mg/L
mg/L

GCAL Report 210041229

Summary of Compounds Detected (con't)

GCAL ID Client ID Matrix Collect Date/Time Receive Date/Time
21004122905 T6 MSD Water 04/06/2010 16:00 04/09/2010 12:06
SW-846 6010B TCLP
CAS# Parameter Result RDL MDL Units
7440-36-0 Antimony 0.49 0.060 0.0035 mg/L
7440-38-2 Arsenic 0.55 0.20 0.0030 mg/L
7440-39-3 Barium 2.99 1.00 0.00031 mg/L
7440-41-7 Beryllium 0.51 0.0050 0.000068 mg/L
7440-43-9 Cadmium 0.51 0.010 0.00016 mg/L
7440-47-3 Chromium 0.50 0.050 0.00032 mg/L
7439-92-1 Lead 0.51 0.10 0.0015 mg/L
7440-02-0 Nickel 1.01 0.040 0.0012 mg/L
7782-49-2 Selenium 0.51 0.10 0.0037 mg/L
7440-22-4 Silver 0.51 0.050 0.00058 mg/L
SW-846 7470A TCLP
CAS# Parameter Result RDL MDL Units
7439-97-6 Mercury 0.00526 0.0020 0.000055 mg/L
SW-846 8260B TCLP
CAS# Parameter Result RDL MDL Units
75-35-4 1,1-Dichloroethene 4.42 0.500 0.016 mg/L
107-06-2 1,2-Dichloroethane 9.17 0.500 0.00860 mg/L
78-93-3 2-Butanone 3.60 2.50 0.00933 mg/L
71-43-2 Benzene 5.14 0.500 0.00542 mg/L
56-23-5 Carbon tetrachloride 4.44 0.500 0.015 mg/L
108-90-7 Chlorobenzene 4.51 0.500 0.00274 mg/L
67-66-3 Chloroform 7.36 0.500 0.00565 mg/L
127-18-4 Tetrachloroethene 4.57 0.500 0.012 mg/L
79-01-6 Trichloroethene 4.45 0.500 0.00618 mg/L
75-01-4 Vinyl chloride 4.34 0.500 0.00930 mg/L
TX1005 Hydrocarbons by Range
CAS# Parameter Result RDL MDL Units
GCSV-05-02 >C12-C28 27100 149 130 ug/L
GCSV-05-01 C6-C12 24300 149 111 ug/L
GCSV-05-04 Total TPH (C6-C35) 51400 149 111 ug/L

GCAL Report 210041229

Summary of Compounds Detected (con't)

GCAL ID Client ID
21004122906 T13
SW-846 6010B TCLP
CAS# Parameter
7440-39-3 Barium
7439-92-1 Lead
7782-49-2 Selenium
7440-22-4 Silver
Matrix
Solid
Collect Date/Time
04/07/2010 11:00
Result
0.79B
0.0056B
0.037B
0.0015B
RDL
1.00
0.10
0.10
0.050
Receive Date/Time
04/09/2010 12:06
MDL
0.00031
0.0015
0.0037
0.00058
Units
mg/L
mg/L
mg/L
mg/L
ASTM E203-96 WaterK
CAS# Parameter
W-02-8 Karl Fisher H2O
Result
49.3
RDL
0.100
MDL
0.036
Units
%
SW-846 8260B TCLP
CAS# Parameter
75-35-4 1,1-Dichloroethene
107-06-2 1,2-Dichloroethane
71-43-2 Benzene
67-66-3 Chloroform
127-18-4 Tetrachloroethene
79-01-6 Trichloroethene
75-01-4 Vinyl chloride

Result
0.043J
1.42
2.07
0.397
0.789
1.28
0.068J
RDL
0.200
0.200
0.200
0.200
0.200
0.200
0.200
0.200
MDL
0.00656
0.00344
0.00217
0.00226
0.00484
0.00247
0.00372
Units
mg/L
mg/L
mg/L
mg/L
mg/L
mg/L
mg/L
ASTM D240 Heat of Combustion
CAS# Parameter
WET-014 Heat of Combustion
Result
3459
RDL
90
MDL
90
Units
BTU/lb
GCAL ID Client ID
21004122907 T15
SW-846 8260B TCLP
CAS# Parameter
71-43-2 Benzene
Matrix
Solid
Collect Date/Time
04/07/2010 16:00
Result
0.105J
RDL
0.200
Receive Date/Time

04/09/2010 12:06
MDL
0.00217
Units
mg/L
ASTM D240 Heat of Combustion
CAS# Parameter
WET-014 Heat of Combustion
Result
17162
RDL
90
MDL
90
Units
BTU/lb

GCAL Report 210041229

Summary of Compounds Detected (con't)

GCAL ID Client ID
21004122908 T16
SW-846 8270C TCLP
CAS# Parameter
1319-77-3 Cresols
1319-77-3MP m,p-Cresol
95-48-7 o-Cresol
Matrix
Water
Collect Date/Time
04/07/2010 12:00
Result
0.012J
0.00773J
0.00455J
RDL
0.1000
0.0500
0.0500
Receive Date/Time
04/09/2010 12:06
MDL
0.0024
0.0017
0.0009
Units
mg/L
mg/L
mg/L
SW-846 6010B TCLP
CAS# Parameter
7440-39-3 Barium
7440-47-3 Chromium
7439-92-1 Lead
7440-02-0 Nickel
7782-49-2 Selenium
Result
0.43B
0.013B
0.0046B
0.060
0.0074B
RDL
1.00
0.050
0.10
0.040
0.10
MDL
0.00031
0.00032
0.0015
0.0012
0.0037

Units
mg/L
mg/L
mg/L
mg/L
mg/L
SW-846 8260B TCLP
CAS# Parameter
78-93-3 2-Butanone
Result
0.067J
RDL
1.00
MDL
0.00373
Units
mg/L
TX1005 Hydrocarbons by Range
CAS# Parameter
GCSV-05-02 >C12-C28
GCSV-05-03 >C28-C35
GCSV-05-04 Total TPH (C6-C35)
Result
97800
49500
147000
RDL
291
291
291
MDL
254
254
218
Units
ug/L
ug/L
ug/L
GCAL ID Client ID
21004122909 T18
SW-846 8260B TCLP
CAS# Parameter
107-06-2 1,2-Dichloroethane
67-66-3 Chloroform
Matrix
Solid
Collect Date/Time
04/07/2010 10:00
Result
0.299
4.48
RDL
0.200
1.00
Receive Date/Time
04/09/2010 12:06
MDL

0.017
0.011
Units
mg/L
mg/L
GCAL ID Client ID
21004122910 T19
SW-846 8260B TCLP
CAS# Parameter
107-06-2 1,2-Dichloroethane
Matrix
Solid
Collect Date/Time
04/07/2010 13:00
Result
0.051J
RDL
0.200
Receive Date/Time
04/09/2010 12:06
MDL
0.00344
Units
mg/L

GCAL Report 210041229

Summary of Compounds Detected (con't)

GCAL ID Client ID
21004122910 T19
SW-846 8260B TCLP
CAS# Parameter
71-43-2 Benzene
67-66-3 Chloroform
79-01-6 Trichloroethene
Matrix
Solid
Collect Date/Time
04/07/2010 13:00
Result
1.55
0.048J
0.047J
RDL
0.200
0.200
0.200
Receive Date/Time
04/09/2010 12:06
MDL
0.00217
0.00226
0.00247
Units
mg/L
mg/L
mg/L
GCAL ID Client ID
21004122911 T21
SW-846 8260B TCLP
CAS# Parameter
107-06-2 1,2-Dichloroethane
71-43-2 Benzene
67-66-3 Chloroform
Matrix
Water
Collect Date/Time
04/07/2010 15:00
Result
22.1
1.16
43.4
RDL
0.500
0.500
2.50
Receive Date/Time
04/09/2010 12:06
MDL
0.043
0.027
0.028

Units
mg/L
mg/L
mg/L
GCAL ID Client ID
21004122912 T22
SW-846 8260B TCLP
CAS# Parameter
67-66-3 Chloroform
Matrix
Solid
Collect Date/Time
04/07/2010 10:15
Result
0.052J
RDL
0.200
Receive Date/Time
04/09/2010 12:06
MDL
0.00226
Units
mg/L
SW-846 6010B TCLP
CAS# Parameter
7440-39-3 Barium
7439-92-1 Lead
7782-49-2 Selenium
7440-22-4 Silver
Result
0.47B
0.0028B
0.041B
0.0036B
RDL
1.00
0.10
0.10
0.050
MDL
0.00031
0.0015
0.0037
0.00058
Units
mg/L
mg/L
mg/L
mg/L

GCAL Report 210041229

GCAL ID Client ID Matrix Collect Date/Time Receive Date/Time
 21004122901 T2 Water 04/06/2010 12:00 04/09/2010 12:06
 SW-846 8260B TCLP
 Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
 200 04/16/2010 01:26 RJU 429573
 CAS# Parameter Result RDL MDL Units
 75-35-4 1,1-Dichloroethene 0.200U 0.200 0.033 mg/L
 107-06-2 1,2-Dichloroethane 28.9 0.200 0.017 mg/L
 78-93-3 2-Butanone 5.64 5.00 0.019 mg/L
 71-43-2 Benzene 2.43 0.200 0.011 mg/L
 56-23-5 Carbon tetrachloride 0.200U 0.200 0.030 mg/L
 108-90-7 Chlorobenzene 0.200U 0.200 0.00548 mg/L
 67-66-3 Chloroform 1.25 1.00 0.011 mg/L
 127-18-4 Tetrachloroethene 0.534 0.200 0.024 mg/L
 79-01-6 Trichloroethene 12.7 0.200 0.012 mg/L
 75-01-4 Vinyl chloride 0.200U 0.200 0.019 mg/L
 CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits
 460-00-4 4-Bromofluorobenzene 10000 10400 ug/L 104 62 -130
 1868-53-7 Dibromofluoromethane 10000 9880 ug/L 99 65 -127
 2037-26-5 Toluene d8 10000 10800 ug/L 108 71 -134
 17060-07-0 1,2-Dichloroethane-d4 10000 9200 ug/L 92 62 -127
 SW-846 8270C TCLP
 Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
 04/16/2010 08:00 429512 3510C 1 04/16/2010 13:57 KCB 429591
 CAS# Parameter Result RDL MDL Units
 106-46-7 1,4-Dichlorobenzene 0.0500U 0.0500 0.0006 mg/L
 95-95-4 2,4,5-Trichlorophenol 0.0500U 0.0500 0.0006 mg/L
 88-06-2 2,4,6-Trichlorophenol 0.0500U 0.0500 0.0008 mg/L
 121-14-2 2,4-Dinitrotoluene 0.0500U 0.0500 0.0012 mg/L
 1319-77-3 Cresols 0.1000U 0.1000 0.0024 mg/L
 118-74-1 Hexachlorobenzene 0.0500U 0.0500 0.0013 mg/L
 87-68-3 Hexachlorobutadiene 0.0500U 0.0500 0.0011 mg/L
 67-72-1 Hexachloroethane 0.0500U 0.0500 0.0055 mg/L
 98-95-3 Nitrobenzene 0.0500U 0.0500 0.0011 mg/L
 87-86-5 Pentachlorophenol 0.2500U 0.2500 0.0076 mg/L
 110-86-1 Pyridine 0.0500U 0.0500 0.0077 mg/L
 1319-77-3MP m,p-Cresol 0.0500U 0.0500 0.0017 mg/L
 95-48-7 o-Cresol 0.0500U 0.0500 0.0009 mg/L
 CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits
 4165-60-0 Nitrobenzene-d5 250 211 ug/L 84 48 -123
 321-60-8 2-Fluorobiphenyl 250 246 ug/L 98 16 -128
 1718-51-0 Terphenyl-d14 250 180 ug/L 72 38 -167
 4165-62-2 Phenol-d5 500 171 ug/L 34 10 -123
 367-12-4 2-Fluorophenol 500 247 ug/L 49 10 -120
 118-79-6 2,4,6-Tribromophenol 500 557 ug/L 111 44 -121

GCAL Report 210041229

GCAL ID
21004122901
Client ID
T2
Matrix
Water
Collect Date/Time
04/06/2010 12:00
Receive Date/Time
04/09/2010 12:06
SW-846 6010B TCLP
Prep Date
04/15/2010 08:45
Prep Batch
429492
Prep Method
SW-846 3010A
Dilution
1
Analyzed
04/15/2010 23:49
By
CLB
Analytical Batch
429524
CAS# Parameter Result RDL MDL Units
7440-38-2
7440-39-3
7440-43-9
7440-47-3
7439-92-1
7782-49-2
7440-22-4
Arsenic
Barium
Cadmium
Chromium
Lead
Selenium
Silver
0.020B
16.8
0.010U
0.013B
0.10U
0.0061B
0.050U
0.20
1.00
0.010
0.050
0.10
0.10
0.050
0.0030
0.00031
0.00016

0.00032
0.0015
0.0037
0.00058
mg/L
mg/L
mg/L
mg/L
mg/L
mg/L
mg/L
mg/L
SW-846 7470A TCLP
Prep Date
04/15/2010 08:45
Prep Batch
429494
Prep Method
SW-846 7470A
Dilution
1
Analyzed
04/15/2010 12:03
By
TEA
Analytical Batch
429521
CAS# Parameter Result RDL MDL Units
7439-97-6 Mercury 0.00067B 0.020 0.00055 mg/L

GCAL Report 210041229

GCAL ID Client ID Matrix Collect Date/Time Receive Date/Time
 21004122902 T4 Water 04/06/2010 15:00 04/09/2010 12:06
 SW-846 8260B TCLP
 Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
 40 04/15/2010 21:57 SLR 429573
 CAS# Parameter Result RDL MDL Units
 75-35-4 1,1-Dichloroethene 0.200U 0.200 0.00656 mg/L
 107-06-2 1,2-Dichloroethane 0.200U 0.200 0.00344 mg/L
 78-93-3 2-Butanone 1.00U 1.00 0.00373 mg/L
 71-43-2 Benzene 0.200U 0.200 0.00217 mg/L
 56-23-5 Carbon tetrachloride 0.200U 0.200 0.00592 mg/L
 108-90-7 Chlorobenzene 0.200U 0.200 0.00110 mg/L
 67-66-3 Chloroform 0.200U 0.200 0.00226 mg/L
 127-18-4 Tetrachloroethene 0.200U 0.200 0.00484 mg/L
 79-01-6 Trichloroethene 0.200U 0.200 0.00247 mg/L
 75-01-4 Vinyl chloride 0.200U 0.200 0.00372 mg/L
 CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits
 460-00-4 4-Bromofluorobenzene 2000 1920 ug/L 96 62 -130
 1868-53-7 Dibromofluoromethane 2000 1990 ug/L 100 65 -127
 2037-26-5 Toluene d8 2000 1870 ug/L 94 71 -134
 17060-07-0 1,2-Dichloroethane-d4 2000 1930 ug/L 97 62 -127
 SW-846 8270C TCLP
 Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
 04/16/2010 08:00 429512 3510C 1 04/16/2010 14:12 KCB 429591
 CAS# Parameter Result RDL MDL Units
 106-46-7 1,4-Dichlorobenzene 0.0500U 0.0500 0.0006 mg/L
 95-95-4 2,4,5-Trichlorophenol 0.0500U 0.0500 0.0006 mg/L
 88-06-2 2,4,6-Trichlorophenol 0.0500U 0.0500 0.0008 mg/L
 121-14-2 2,4-Dinitrotoluene 0.0500U 0.0500 0.0012 mg/L
 1319-77-3 Cresols 0.1000U 0.1000 0.0024 mg/L
 118-74-1 Hexachlorobenzene 0.0500U 0.0500 0.0013 mg/L
 87-68-3 Hexachlorobutadiene 0.0500U 0.0500 0.0011 mg/L
 67-72-1 Hexachloroethane 0.0500U 0.0500 0.0055 mg/L
 98-95-3 Nitrobenzene 0.0500U 0.0500 0.0011 mg/L
 87-86-5 Pentachlorophenol 0.2500U 0.2500 0.0076 mg/L
 110-86-1 Pyridine 0.0500U 0.0500 0.0077 mg/L
 1319-77-3MP m,p-Cresol 0.0500U 0.0500 0.0017 mg/L
 95-48-7 o-Cresol 0.0500U 0.0500 0.0009 mg/L
 CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits
 4165-60-0 Nitrobenzene-d5 250 233 ug/L 93 48 -123
 321-60-8 2-Fluorobiphenyl 250 235 ug/L 94 16 -128
 1718-51-0 Terphenyl-d14 250 182 ug/L 73 38 -167
 4165-62-2 Phenol-d5 500 211 ug/L 42 10 -123
 367-12-4 2-Fluorophenol 500 308 ug/L 62 10 -120
 118-79-6 2,4,6-Tribromophenol 500 512 ug/L 102 44 -121

GCAL Report 210041229

GCAL ID Client ID Matrix Collect Date/Time Receive Date/Time
21004122902 T4 Water 04/06/2010 15:00 04/09/2010 12:06
TX1005 Hydrocarbons by Range
Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
04/16/2010 14:00 429379 TNRCC 1005 1 04/19/2010 15:41 SMH 429750
CAS# Parameter Result RDL MDL Units
GCSV-05-02 >C12-C28 149U 149 130 ug/L
GCSV-05-03 >C28-C35 149U 149 130 ug/L
GCSV-05-01 C6-C12 149U 149 112 ug/L
GCSV-05-04 Total TPH (C6-C35) 149U 149 112 ug/L
CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits
84-15-1 o-Terphenyl 16600 22400 ug/L 135 58 -148
SW-846 6010B TCLP
Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
04/15/2010 08:45 429492 SW-846 3010A 1 04/16/2010 00:04 CLB 429524
CAS# Parameter Result RDL MDL Units
7440-36-0 Antimony 0.020B 0.060 0.0035 mg/L
7440-38-2 Arsenic 0.0030B 0.20 0.0030 mg/L
7440-39-3 Barium 13.1 1.00 0.00031 mg/L
7440-41-7 Beryllium 0.0050U 0.0050 0.000068 mg/L
7440-43-9 Cadmium 0.010U 0.010 0.00016 mg/L
7440-47-3 Chromium 0.050U 0.050 0.00032 mg/L
7439-92-1 Lead 0.10U 0.10 0.0015 mg/L
7440-02-0 Nickel 0.038B 0.040 0.0012 mg/L
7782-49-2 Selenium 0.10U 0.10 0.0037 mg/L
7440-22-4 Silver 0.050U 0.050 0.00058 mg/L
SW-846 7470A TCLP
Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
04/15/2010 08:45 429494 SW-846 7470A 1 04/15/2010 12:04 TEA 429521
CAS# Parameter Result RDL MDL Units
7439-97-6 Mercury 0.0020U 0.0020 0.000055 mg/L

GCAL Report 210041229

GCAL ID Client ID Matrix Collect Date/Time Receive Date/Time
 21004122903 T6 Water 04/06/2010 16:00 04/09/2010 12:06
 SW-846 8260B TCLP
 Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
 100 04/15/2010 21:35 SLR 429573
 CAS# Parameter Result RDL MDL Units
 75-35-4 1,1-Dichloroethene 0.500U 0.500 0.016 mg/L
 107-06-2 1,2-Dichloroethane 6.91 0.500 0.00860 mg/L
 78-93-3 2-Butanone 2.50U 2.50 0.00933 mg/L
 71-43-2 Benzene 0.802 0.500 0.00542 mg/L
 56-23-5 Carbon tetrachloride 0.500U 0.500 0.015 mg/L
 108-90-7 Chlorobenzene 0.500U 0.500 0.00274 mg/L
 67-66-3 Chloroform 5.36 0.500 0.00565 mg/L
 127-18-4 Tetrachloroethene 0.500U 0.500 0.012 mg/L
 79-01-6 Trichloroethene 0.245J 0.500 0.00618 mg/L
 75-01-4 Vinyl chloride 0.100U 0.100 0.00930 mg/L
 CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits
 460-00-4 4-Bromofluorobenzene 5000 5020 ug/L 100 62 -130
 1868-53-7 Dibromofluoromethane 5000 5010 ug/L 100 65 -127
 2037-26-5 Toluene d8 5000 5010 ug/L 100 71 -134
 17060-07-0 1,2-Dichloroethane-d4 5000 4600 ug/L 92 62 -127
 SW-846 8270C TCLP
 Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
 04/16/2010 08:00 429512 3510C 1 04/16/2010 14:28 KCB 429591
 CAS# Parameter Result RDL MDL Units
 106-46-7 1,4-Dichlorobenzene 0.0500U 0.0500 0.0006 mg/L
 95-95-4 2,4,5-Trichlorophenol 0.0500U 0.0500 0.0006 mg/L
 88-06-2 2,4,6-Trichlorophenol 0.0500U 0.0500 0.0008 mg/L
 121-14-2 2,4-Dinitrotoluene 0.0500U 0.0500 0.0012 mg/L
 1319-77-3 Cresols 0.027J 0.1000 0.0024 mg/L
 118-74-1 Hexachlorobenzene 0.0500U 0.0500 0.0013 mg/L
 87-68-3 Hexachlorobutadiene 0.0500U 0.0500 0.0011 mg/L
 67-72-1 Hexachloroethane 0.0500U 0.0500 0.0055 mg/L
 98-95-3 Nitrobenzene 0.0500U 0.0500 0.0011 mg/L
 87-86-5 Pentachlorophenol 0.2500U 0.2500 0.0076 mg/L
 110-86-1 Pyridine 0.0500U 0.0500 0.0077 mg/L
 1319-77-3MP m,p-Cresol 0.012J 0.0500 0.0017 mg/L
 95-48-7 o-Cresol 0.016J 0.0500 0.0009 mg/L
 CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits
 4165-60-0 Nitrobenzene-d5 250 218 ug/L 87 48 -123
 321-60-8 2-Fluorobiphenyl 250 212 ug/L 85 16 -128
 1718-51-0 Terphenyl-d14 250 174 ug/L 70 38 -167
 4165-62-2 Phenol-d5 500 227 ug/L 45 10 -123
 367-12-4 2-Fluorophenol 500 311 ug/L 62 10 -120
 118-79-6 2,4,6-Tribromophenol 500 496 ug/L 99 44 -121

GCAL Report 210041229

GCAL ID Client ID Matrix Collect Date/Time Receive Date/Time
21004122903 T6 Water 04/06/2010 16:00 04/09/2010 12:06
TX1005 Hydrocarbons by Range
Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
04/16/2010 14:00 429379 TNRCC 1005 1 04/20/2010 11:18 SMH 429794
CAS# Parameter Result RDL MDL Units
GCSV-05-02 >C12-C28 145U 145 126 ug/L
GCSV-05-03 >C28-C35 145U 145 126 ug/L
GCSV-05-01 C6-C12 145U 145 109 ug/L
GCSV-05-04 Total TPH (C6-C35) 145U 145 109 ug/L
CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits
84-15-1 o-Terphenyl 16100 18000 ug/L 112 58 -148
SW-846 6010B TCLP
Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
04/15/2010 08:45 429492 SW-846 3010A 1 04/15/2010 20:48 CLB 429524
CAS# Parameter Result RDL MDL Units
7440-36-0 Antimony 0.060U 0.060 0.0035 mg/L
7440-38-2 Arsenic 0.016B 0.20 0.0030 mg/L
7440-39-3 Barium 2.42 1.00 0.00031 mg/L
7440-41-7 Beryllium 0.0050U 0.0050 0.000068 mg/L
7440-43-9 Cadmium 0.0058B 0.010 0.00016 mg/L
7440-47-3 Chromium 0.0021B 0.050 0.00032 mg/L
7439-92-1 Lead 0.013B 0.10 0.0015 mg/L
7440-02-0 Nickel 0.50 0.040 0.0012 mg/L
7782-49-2 Selenium 0.10U 0.10 0.0037 mg/L
7440-22-4 Silver 0.050U 0.050 0.00058 mg/L
SW-846 7470A TCLP
Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
04/15/2010 08:45 429494 SW-846 7470A 1 04/15/2010 11:56 TEA 429521
CAS# Parameter Result RDL MDL Units
7439-97-6 Mercury 0.00011B 0.0020 0.000055 mg/L

GCAL Report 210041229

GCAL ID Client ID Matrix Collect Date/Time Receive Date/Time
 21004122904 T6 MS Water 04/06/2010 16:00 04/09/2010 12:06
 SW-846 8260B TCLP
 Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
 100 04/15/2010 22:42 RJU 429573
 CAS# Parameter Result RDL MDL Units
 75-35-4 1,1-Dichloroethene 4.26 0.500 0.016 mg/L
 107-06-2 1,2-Dichloroethane 10.6 0.500 0.00860 mg/L
 78-93-3 2-Butanone 3.58 2.50 0.00933 mg/L
 71-43-2 Benzene 5.24 0.500 0.00542 mg/L
 56-23-5 Carbon tetrachloride 4.24 0.500 0.015 mg/L
 108-90-7 Chlorobenzene 4.40 0.500 0.00274 mg/L
 67-66-3 Chloroform 8.71 0.500 0.00565 mg/L
 127-18-4 Tetrachloroethene 4.64 0.500 0.012 mg/L
 79-01-6 Trichloroethene 4.57 0.500 0.00618 mg/L
 75-01-4 Vinyl chloride 4.37 0.500 0.00930 mg/L
 CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits
 460-00-4 4-Bromofluorobenzene 5000 5030 ug/L 101 62 -130
 1868-53-7 Dibromofluoromethane 5000 4800 ug/L 96 65 -127
 2037-26-5 Toluene d8 5000 4980 ug/L 100 71 -134
 17060-07-0 1,2-Dichloroethane-d4 5000 4610 ug/L 92 62 -127
 SW-846 8270C TCLP
 Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
 04/16/2010 08:00 429512 3510C 1 04/16/2010 14:44 KCB 429591
 CAS# Parameter Result RDL MDL Units
 106-46-7 1,4-Dichlorobenzene 0.414 0.0500 0.0006 mg/L
 95-95-4 2,4,5-Trichlorophenol 0.0500U 0.0500 0.0006 mg/L
 88-06-2 2,4,6-Trichlorophenol 0.0500U 0.0500 0.0008 mg/L
 121-14-2 2,4-Dinitrotoluene 0.527 0.0500 0.0012 mg/L
 1319-77-3 Cresols 0.031J 0.1000 0.0024 mg/L
 118-74-1 Hexachlorobenzene 0.0500U 0.0500 0.0013 mg/L
 87-68-3 Hexachlorobutadiene 0.0500U 0.0500 0.0011 mg/L
 67-72-1 Hexachloroethane 0.0500U 0.0500 0.0055 mg/L
 98-95-3 Nitrobenzene 0.0500U 0.0500 0.0011 mg/L
 87-86-5 Pentachlorophenol 0.403 0.2500 0.0076 mg/L
 110-86-1 Pyridine 0.0500U 0.0500 0.0077 mg/L
 1319-77-3MP m,p-Cresol 0.013J 0.0500 0.0017 mg/L
 95-48-7 o-Cresol 0.018J 0.0500 0.0009 mg/L
 CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits
 4165-60-0 Nitrobenzene-d5 250 229 ug/L 92 48 -123
 321-60-8 2-Fluorobiphenyl 250 239 ug/L 96 16 -128
 1718-51-0 Terphenyl-d14 250 182 ug/L 73 38 -167
 4165-62-2 Phenol-d5 500 219 ug/L 44 10 -123
 367-12-4 2-Fluorophenol 500 287 ug/L 57 10 -120
 118-79-6 2,4,6-Tribromophenol 500 532 ug/L 106 44 -121

GCAL Report 210041229

GCAL ID Client ID Matrix Collect Date/Time Receive Date/Time
21004122904 T6 MS Water 04/06/2010 16:00 04/09/2010 12:06
TX1005 Hydrocarbons by Range
Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
04/16/2010 14:00 429379 TNRCC 1005 1 04/20/2010 11:47 SMH 429794
CAS# Parameter Result RDL MDL Units
GCSV-05-02 >C12-C28 26900 150 130 ug/L
GCSV-05-03 >C28-C35 150U 150 130 ug/L
GCSV-05-01 C6-C12 24700 150 112 ug/L
GCSV-05-04 Total TPH (C6-C35) 51600 150 112 ug/L
CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits
84-15-1 o-Terphenyl 16600 19800 ug/L 119 58 -148
SW-846 6010B TCLP
Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
04/15/2010 08:45 429492 SW-846 3010A 1 04/15/2010 20:55 CLB 429524
CAS# Parameter Result RDL MDL Units
7440-36-0 Antimony 0.47 0.060 0.0035 mg/L
7440-38-2 Arsenic 0.53 0.20 0.0030 mg/L
7440-39-3 Barium 2.82 1.00 0.00031 mg/L
7440-41-7 Beryllium 0.49 0.0050 0.000068 mg/L
7440-43-9 Cadmium 0.49 0.010 0.00016 mg/L
7440-47-3 Chromium 0.49 0.050 0.00032 mg/L
7439-92-1 Lead 0.49 0.10 0.0015 mg/L
7440-02-0 Nickel 0.96 0.040 0.0012 mg/L
7782-49-2 Selenium 0.50 0.10 0.0037 mg/L
7440-22-4 Silver 0.49 0.050 0.00058 mg/L
SW-846 7470A TCLP
Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
04/15/2010 08:45 429494 SW-846 7470A 1 04/15/2010 11:58 TEA 429521
CAS# Parameter Result RDL MDL Units
7439-97-6 Mercury 0.00527 0.0020 0.000055 mg/L

GCAL Report 210041229

GCAL ID Client ID Matrix Collect Date/Time Receive Date/Time
 21004122905 T6 MSD Water 04/06/2010 16:00 04/09/2010 12:06
 SW-846 8260B TCLP
 Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
 100 04/15/2010 23:04 RJU 429573
 CAS# Parameter Result RDL MDL Units
 75-35-4 1,1-Dichloroethene 4.42 0.500 0.016 mg/L
 107-06-2 1,2-Dichloroethane 9.17 0.500 0.00860 mg/L
 78-93-3 2-Butanone 3.60 2.50 0.00933 mg/L
 71-43-2 Benzene 5.14 0.500 0.00542 mg/L
 56-23-5 Carbon tetrachloride 4.44 0.500 0.015 mg/L
 108-90-7 Chlorobenzene 4.51 0.500 0.00274 mg/L
 67-66-3 Chloroform 7.36 0.500 0.00565 mg/L
 127-18-4 Tetrachloroethene 4.57 0.500 0.012 mg/L
 79-01-6 Trichloroethene 4.45 0.500 0.00618 mg/L
 75-01-4 Vinyl chloride 4.34 0.500 0.00930 mg/L
 CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits
 460-00-4 4-Bromofluorobenzene 5000 4910 ug/L 98 62 -130
 1868-53-7 Dibromofluoromethane 5000 4990 ug/L 100 65 -127
 2037-26-5 Toluene d8 5000 5100 ug/L 102 71 -134
 17060-07-0 1,2-Dichloroethane-d4 5000 4660 ug/L 93 62 -127
 SW-846 8270C TCLP
 Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
 04/16/2010 08:00 429512 3510C 1 04/16/2010 15:00 KCB 429591
 CAS# Parameter Result RDL MDL Units
 106-46-7 1,4-Dichlorobenzene 0.470 0.0500 0.0006 mg/L
 95-95-4 2,4,5-Trichlorophenol 0.0500U 0.0500 0.0006 mg/L
 88-06-2 2,4,6-Trichlorophenol 0.0500U 0.0500 0.0008 mg/L
 121-14-2 2,4-Dinitrotoluene 0.527 0.0500 0.0012 mg/L
 1319-77-3 Cresols 0.034J 0.1000 0.0024 mg/L
 118-74-1 Hexachlorobenzene 0.0500U 0.0500 0.0013 mg/L
 87-68-3 Hexachlorobutadiene 0.0500U 0.0500 0.0011 mg/L
 67-72-1 Hexachloroethane 0.0500U 0.0500 0.0055 mg/L
 98-95-3 Nitrobenzene 0.0500U 0.0500 0.0011 mg/L
 87-86-5 Pentachlorophenol 0.424 0.2500 0.0076 mg/L
 110-86-1 Pyridine 0.0500U 0.0500 0.0077 mg/L
 1319-77-3MP m,p-Cresol 0.014J 0.0500 0.0017 mg/L
 95-48-7 o-Cresol 0.020J 0.0500 0.0009 mg/L
 CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits
 4165-60-0 Nitrobenzene-d5 250 244 ug/L 98 48 -123
 321-60-8 2-Fluorobiphenyl 250 245 ug/L 98 16 -128
 1718-51-0 Terphenyl-d14 250 181 ug/L 72 38 -167
 4165-62-2 Phenol-d5 500 222 ug/L 44 10 -123
 367-12-4 2-Fluorophenol 500 307 ug/L 61 10 -120
 118-79-6 2,4,6-Tribromophenol 500 512 ug/L 102 44 -121

GCAL Report 210041229

GCAL ID Client ID Matrix Collect Date/Time Receive Date/Time
21004122905 T6 MSD Water 04/06/2010 16:00 04/09/2010 12:06
TX1005 Hydrocarbons by Range
Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
04/16/2010 14:00 429379 TNRCC 1005 1 04/19/2010 18:19 SMH 429750
CAS# Parameter Result RDL MDL Units
GCSV-05-02 >C12-C28 27100 149 130 ug/L
GCSV-05-03 >C28-C35 149U 149 130 ug/L
GCSV-05-01 C6-C12 24300 149 111 ug/L
GCSV-05-04 Total TPH (C6-C35) 51400 149 111 ug/L
CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits
84-15-1 o-Terphenyl 16500 20800 ug/L 126 58 -148
SW-846 6010B TCLP
Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
04/15/2010 08:45 429492 SW-846 3010A 1 04/15/2010 21:02 CLB 429524
CAS# Parameter Result RDL MDL Units
7440-36-0 Antimony 0.49 0.060 0.0035 mg/L
7440-38-2 Arsenic 0.55 0.20 0.0030 mg/L
7440-39-3 Barium 2.99 1.00 0.00031 mg/L
7440-41-7 Beryllium 0.51 0.0050 0.000068 mg/L
7440-43-9 Cadmium 0.51 0.010 0.00016 mg/L
7440-47-3 Chromium 0.50 0.050 0.00032 mg/L
7439-92-1 Lead 0.51 0.10 0.0015 mg/L
7440-02-0 Nickel 1.01 0.040 0.0012 mg/L
7782-49-2 Selenium 0.51 0.10 0.0037 mg/L
7440-22-4 Silver 0.51 0.050 0.00058 mg/L
SW-846 7470A TCLP
Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
04/15/2010 08:45 429494 SW-846 7470A 1 04/15/2010 12:00 TEA 429521
CAS# Parameter Result RDL MDL Units
7439-97-6 Mercury 0.00526 0.0020 0.000055 mg/L

GCAL Report 210041229

GCAL ID Client ID
21004122906 T13
SW-846 8260B TCLP
Prep Date Prep Batch
CAS# Parameter
75-35-4 1,1-Dichloroethene
107-06-2 1,2-Dichloroethane
78-93-3 2-Butanone
71-43-2 Benzene
56-23-5 Carbon tetrachloride
108-90-7 Chlorobenzene
67-66-3 Chloroform
127-18-4 Tetrachloroethene
79-01-6 Trichloroethene
75-01-4 Vinyl chloride
Prep Method
Matrix
Solid
Collect Date/Time
04/07/2010 11:00
Dilution Analyzed
40 04/16/2010 01:50
Result RDL
0.043J 0.200
1.42 0.200
0.200U 0.200
2.07 0.200
0.200U 0.200
0.200U 0.200
0.397 0.200
0.789 0.200
1.28 0.200
0.068J 0.200
Receive Date/Time
04/09/2010 12:06
By Analytical Batch
RJU 429573
MDL
0.00656
0.00344
0.00373
0.00217
0.00592
0.00110
0.00226
0.00484
0.00247
0.00372
Units
mg/L
mg/L
mg/L
mg/L
mg/L
mg/L
mg/L
mg/L

mg/L
mg/L
CAS#
460-00-4
1868-53-7
2037-26-5
17060-07-0
Surrogate
4-Bromofluorobenzene
Dibromofluoromethane
Toluene d8
1,2-Dichloroethane-d4
Conc. Spiked
2000
2000
2000
2000
Conc. Rec
2150
1950
2190
1810
Units
ug/L
ug/L
ug/L
ug/L
% Recovery
108
98
110
91
Rec Limits
62 -130
65 -127
71 -134
62 -127
SW-846 6010B TCLP
Prep Date Prep Batch
04/15/2010 08:45 429507
Prep Method
SW-846 3010A
Dilution
1
Analyzed
04/15/2010 23:42
By
CLB
Analytical Batch
429524
CAS#
7440-38-2
7440-39-3
7440-43-9
7440-47-3
7439-92-1
7782-49-2

7440-22-4
Parameter
Arsenic
Barium
Cadmium
Chromium
Lead
Selenium
Silver
Result
0.20U
0.79B
0.010U
0.050U
0.0056B
0.037B
0.0015B
RDL
0.20
1.00
0.010
0.050
0.10
0.10
0.050
MDL
0.0030
0.00031
0.00016
0.00032
0.0015
0.0037
0.00058
Units
mg/L
mg/L
mg/L
mg/L
mg/L
mg/L
mg/L
mg/L
SW-846 7470A TCLP
Prep Date Prep Batch
04/15/2010 08:45 429508
Prep Method
SW-846 7470A
Dilution
1
Analyzed
04/15/2010 12:20
By
TEA
Analytical Batch
429521
CAS#
7439-97-6
Parameter

Mercury
Result
0.0020U
RDL
0.0020
MDL
0.000055
Units
mg/L

GCAL Report 210041229

GCAL ID
21004122906
Client ID
T13
Matrix
Solid
Collect Date/Time
04/07/2010 11:00
Receive Date/Time
04/09/2010 12:06
ASTM D240 Heat of Combustion
Prep Date Prep Batch
04/20/2010 08:00 429779
Prep Method
EPA 1010
Dilution
1
Analyzed
04/20/2010 08:00
By
AEL
Analytical Batch
429780
CAS#
WET-014
Parameter
Heat of Combustion
Result
3459
RDL
90
MDL
90
Units
BTU/lb
ASTM E203-96 WaterK
Prep Date Prep Batch Prep Method Dilution
1
Analyzed
04/13/2010 09:38
By
JEM
Analytical Batch
429420
CAS#
W-02-8
Parameter
Karl Fisher H2O
Result
49.3
RDL
0.100
MDL
0.036
Units
%
RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL Report 210041229

GCAL ID Client ID Matrix Collect Date/Time Receive Date/Time
21004122907 T15 Solid 04/07/2010 16:00 04/09/2010 12:06
SW-846 8260B TCLP
Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
40 04/16/2010 02:14 RJU 429573
CAS# Parameter Result RDL MDL Units
75-35-4 1,1-Dichloroethene 0.200U 0.200 0.00656 mg/L
107-06-2 1,2-Dichloroethane 0.200U 0.200 0.00344 mg/L
78-93-3 2-Butanone 0.200U 0.200 0.00373 mg/L
71-43-2 Benzene 0.105J 0.200 0.00217 mg/L
56-23-5 Carbon tetrachloride 0.200U 0.200 0.00592 mg/L
108-90-7 Chlorobenzene 0.200U 0.200 0.00110 mg/L
67-66-3 Chloroform 0.200U 0.200 0.00226 mg/L
127-18-4 Tetrachloroethene 0.200U 0.200 0.00484 mg/L
79-01-6 Trichloroethene 0.200U 0.200 0.00247 mg/L
75-01-4 Vinyl chloride 0.200U 0.200 0.00372 mg/L
CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits
460-00-4 4-Bromofluorobenzene 2000 2030 ug/L 102 62 -130
1868-53-7 Dibromofluoromethane 2000 2020 ug/L 101 65 -127
2037-26-5 Toluene d8 2000 2190 ug/L 110 71 -134
17060-07-0 1,2-Dichloroethane-d4 2000 2140 ug/L 107 62 -127
SW-846 1010 Flashpoint
Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
1 04/15/2010 13:42 MDT 429555
CAS# Parameter Result RDL MDL Units
000000-01-3 FlashPoint >170 50 50 Deg F
ASTM D240 Heat of Combustion
Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
04/20/2010 08:00 429779 EPA 1010 1 04/20/2010 08:00 AEL 429780
CAS# Parameter Result RDL MDL Units
WET-014 Heat of Combustion 17162 90 90 BTU/lb
ASTM E203-96 WaterK
Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
1 04/13/2010 09:38 JEM 429420
CAS# Parameter Result RDL MDL Units
W-02-8 Karl Fisher H2O 0.100U 0.100 0.036 %
RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL Report 210041229

GCAL ID Client ID Matrix Collect Date/Time Receive Date/Time
 21004122908 T16 Water 04/07/2010 12:00 04/09/2010 12:06
 SW-846 8260B TCLP
 Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
 40 04/15/2010 23:52 RJU 429573
 CAS# Parameter Result RDL MDL Units
 75-35-4 1,1-Dichloroethene 0.200U 0.200 0.00656 mg/L
 107-06-2 1,2-Dichloroethane 0.200U 0.200 0.00344 mg/L
 78-93-3 2-Butanone 0.067J 1.00 0.00373 mg/L
 71-43-2 Benzene 0.200U 0.200 0.00217 mg/L
 56-23-5 Carbon tetrachloride 0.200U 0.200 0.00592 mg/L
 108-90-7 Chlorobenzene 0.200U 0.200 0.00110 mg/L
 67-66-3 Chloroform 0.200U 0.200 0.00226 mg/L
 127-18-4 Tetrachloroethene 0.200U 0.200 0.00484 mg/L
 79-01-6 Trichloroethene 0.200U 0.200 0.00247 mg/L
 75-01-4 Vinyl chloride 0.200U 0.200 0.00372 mg/L
 CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits
 460-00-4 4-Bromofluorobenzene 2000 2170 ug/L 109 62 -130
 1868-53-7 Dibromofluoromethane 2000 1830 ug/L 92 65 -127
 2037-26-5 Toluene d8 2000 2150 ug/L 108 71 -134
 17060-07-0 1,2-Dichloroethane-d4 2000 1790 ug/L 90 62 -127
 SW-846 8270C TCLP
 Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
 04/16/2010 08:00 429512 3510C 1 04/16/2010 15:16 KCB 429591
 CAS# Parameter Result RDL MDL Units
 106-46-7 1,4-Dichlorobenzene 0.0500U 0.0500 0.0006 mg/L
 95-95-4 2,4,5-Trichlorophenol 0.0500U 0.0500 0.0006 mg/L
 88-06-2 2,4,6-Trichlorophenol 0.0500U 0.0500 0.0008 mg/L
 121-14-2 2,4-Dinitrotoluene 0.0500U 0.0500 0.0012 mg/L
 1319-77-3 Cresols 0.012J 0.1000 0.0024 mg/L
 118-74-1 Hexachlorobenzene 0.0500U 0.0500 0.0013 mg/L
 87-68-3 Hexachlorobutadiene 0.0500U 0.0500 0.0011 mg/L
 67-72-1 Hexachloroethane 0.0500U 0.0500 0.0055 mg/L
 98-95-3 Nitrobenzene 0.0500U 0.0500 0.0011 mg/L
 87-86-5 Pentachlorophenol 0.2500U 0.2500 0.0076 mg/L
 110-86-1 Pyridine 0.0500U 0.0500 0.0077 mg/L
 1319-77-3MP m,p-Cresol 0.00773J 0.0500 0.0017 mg/L
 95-48-7 o-Cresol 0.00455J 0.0500 0.0009 mg/L
 CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits
 4165-60-0 Nitrobenzene-d5 250 241 ug/L 96 48 -123
 321-60-8 2-Fluorobiphenyl 250 285 ug/L 114 16 -128
 1718-51-0 Terphenyl-d14 250 154 ug/L 62 38 -167
 4165-62-2 Phenol-d5 500 207 ug/L 41 10 -123
 367-12-4 2-Fluorophenol 500 210 ug/L 42 10 -120
 118-79-6 2,4,6-Tribromophenol 500 486 ug/L 97 44 -121

GCAL Report 210041229

GCAL ID Client ID Matrix Collect Date/Time Receive Date/Time
21004122908 T16 Water 04/07/2010 12:00 04/09/2010 12:06
TX1005 Hydrocarbons by Range
Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
04/16/2010 14:00 429379 TNRCC 1005 2 04/20/2010 12:16 SMH 429794
CAS# Parameter Result RDL MDL Units
GCSV-05-02 >C12-C28 97800 291 254 ug/L
GCSV-05-03 >C28-C35 49500 291 254 ug/L
GCSV-05-01 C6-C12 291U 291 218 ug/L
GCSV-05-04 Total TPH (C6-C35) 147000 291 218 ug/L
CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits
84-15-1 o-Terphenyl 16200 26400 ug/L 163* 58 -148
SW-846 6010B TCLP
Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
04/15/2010 08:45 429492 SW-846 3010A 1 04/15/2010 21:43 CLB 429524
CAS# Parameter Result RDL MDL Units
7440-36-0 Antimony 0.060U 0.060 0.0035 mg/L
7440-38-2 Arsenic 0.20U 0.20 0.0030 mg/L
7440-39-3 Barium 0.43B 1.00 0.00031 mg/L
7440-41-7 Beryllium 0.0050U 0.0050 0.000068 mg/L
7440-43-9 Cadmium 0.010U 0.010 0.00016 mg/L
7440-47-3 Chromium 0.013B 0.050 0.00032 mg/L
7439-92-1 Lead 0.0046B 0.10 0.0015 mg/L
7440-02-0 Nickel 0.060 0.040 0.0012 mg/L
7782-49-2 Selenium 0.0074B 0.10 0.0037 mg/L
7440-22-4 Silver 0.050U 0.050 0.00058 mg/L
SW-846 7470A TCLP
Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
04/15/2010 08:45 429494 SW-846 7470A 1 04/15/2010 12:06 TEA 429521
CAS# Parameter Result RDL MDL Units
7439-97-6 Mercury 0.020U 0.020 0.00055 mg/L

GCAL Report 210041229

GCAL ID Client ID Matrix Collect Date/Time Receive Date/Time
21004122909 T18 Solid 04/07/2010 10:00 04/09/2010 12:06
SW-846 8260B TCLP
Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
200 04/16/2010 00:16 RJU 429573
CAS# Parameter Result RDL MDL Units
75-35-4 1,1-Dichloroethene 0.200U 0.200 0.033 mg/L
107-06-2 1,2-Dichloroethane 0.299 0.200 0.017 mg/L
78-93-3 2-Butanone 1.00U 1.00 0.019 mg/L
71-43-2 Benzene 0.200U 0.200 0.011 mg/L
56-23-5 Carbon tetrachloride 0.200U 0.200 0.030 mg/L
108-90-7 Chlorobenzene 0.200U 0.200 0.00548 mg/L
67-66-3 Chloroform 4.48 1.00 0.011 mg/L
127-18-4 Tetrachloroethene 0.200U 0.200 0.024 mg/L
79-01-6 Trichloroethene 0.200U 0.200 0.012 mg/L
75-01-4 Vinyl chloride 0.200U 0.200 0.019 mg/L
CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits
460-00-4 4-Bromofluorobenzene 10000 10200 ug/L 102 62 -130
1868-53-7 Dibromofluoromethane 10000 10200 ug/L 102 65 -127
2037-26-5 Toluene d8 10000 8850 ug/L 89 71 -134
17060-07-0 1,2-Dichloroethane-d4 10000 10000 ug/L 100 62 -127
SW-846 1010 Flashpoint
Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
1 04/15/2010 13:42 MDT 429555
CAS# Parameter Result RDL MDL Units
000000-01-3 FlashPoint >170 50 50 Deg F
RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL Report 210041229

GCAL ID Client ID Matrix Collect Date/Time Receive Date/Time
21004122910 T19 Solid 04/07/2010 13:00 04/09/2010 12:06
SW-846 8260B TCLP
Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
40 04/16/2010 02:37 RJU 429573
CAS# Parameter Result RDL MDL Units
75-35-4 1,1-Dichloroethene 0.200U 0.200 0.00656 mg/L
107-06-2 1,2-Dichloroethane 0.051J 0.200 0.00344 mg/L
78-93-3 2-Butanone 0.200U 0.200 0.00373 mg/L
71-43-2 Benzene 1.55 0.200 0.00217 mg/L
56-23-5 Carbon tetrachloride 0.200U 0.200 0.00592 mg/L
108-90-7 Chlorobenzene 0.200U 0.200 0.00110 mg/L
67-66-3 Chloroform 0.048J 0.200 0.00226 mg/L
127-18-4 Tetrachloroethene 0.200U 0.200 0.00484 mg/L
79-01-6 Trichloroethene 0.047J 0.200 0.00247 mg/L
75-01-4 Vinyl chloride 0.200U 0.200 0.00372 mg/L
CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits
460-00-4 4-Bromofluorobenzene 2000 1920 ug/L 96 62 -130
1868-53-7 Dibromofluoromethane 2000 2030 ug/L 102 65 -127
2037-26-5 Toluene d8 2000 1830 ug/L 92 71 -134
17060-07-0 1,2-Dichloroethane-d4 2000 1670 ug/L 84 62 -127
SW-846 1010 Flashpoint
Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
1 04/15/2010 13:42 MDT 429555
CAS# Parameter Result RDL MDL Units
000000-01-3 FlashPoint >170 50 50 Deg F
RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL Report 210041229

GCAL ID
21004122911
Client ID
T21
Matrix
Water
Collect Date/Time
04/07/2010 15:00
Receive Date/Time
04/09/2010 12:06
SW-846 8260B TCLP
Prep Date Prep Batch Prep Method Dilution
500
Analyzed
04/16/2010 00:39
By
RJU
Analytical Batch
429573
CAS# Parameter Result RDL MDL Units
75-35-4
107-06-2
78-93-3
71-43-2
56-23-5
108-90-7
67-66-3
127-18-4
79-01-6
75-01-4
1,1-Dichloroethene
1,2-Dichloroethane
2-Butanone
Benzene
Carbon tetrachloride
Chlorobenzene
Chloroform
Tetrachloroethene
Trichloroethene
Vinyl chloride
0.500U
22.1
12.5U
1.16
0.500U
0.500U
43.4
0.500U
0.500U
0.500U
0.500
0.500
12.5
0.500
0.500
0.500
2.50

	CAS#	Surrogate	Conc.	Spiked Conc.	Rec Units	% Recovery	Rec Limits
	460-00-4		0.500				
	1868-53-7		0.500				
	2037-26-5		0.500				
	17060-07-0		0.082				
	4-Bromofluorobenzene		0.043				
	Dibromofluoromethane		0.047				
	Toluene d8		0.027				
	1,2-Dichloroethane-d4		0.074				
	25000		0.014				
	25000		0.028				
	25000		0.061				
	26100		0.031				
	24700		0.047				
	23600		mg/L				
	24100		mg/L				
	ug/L		mg/L				
	ug/L		mg/L				
	ug/L		mg/L				
	104		mg/L				
	99		mg/L				
	94		mg/L				
	96		104				
	62 -130		99				
	65 -127		94				
	71 -134		96				
	62 -127		104				

GCAL ID Client ID Matrix Collect Date/Time Receive Date/Time
 21004122912 T22 Solid 04/07/2010 10:15 04/09/2010 12:06
 SW-846 8260B TCLP
 Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
 40 04/16/2010 01:03 RJU 429573
 CAS# Parameter Result RDL MDL Units
 75-35-4 1,1-Dichloroethene 0.200U 0.200 0.00656 mg/L
 107-06-2 1,2-Dichloroethane 0.200U 0.200 0.00344 mg/L
 78-93-3 2-Butanone 0.200U 0.200 0.00373 mg/L
 71-43-2 Benzene 0.200U 0.200 0.00217 mg/L
 56-23-5 Carbon tetrachloride 0.200U 0.200 0.00592 mg/L
 108-90-7 Chlorobenzene 0.200U 0.200 0.00110 mg/L
 67-66-3 Chloroform 0.052J 0.200 0.00226 mg/L
 127-18-4 Tetrachloroethene 0.200U 0.200 0.00484 mg/L
 79-01-6 Trichloroethene 0.200U 0.200 0.00247 mg/L
 75-01-4 Vinyl chloride 0.200U 0.200 0.00372 mg/L
 CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits
 460-00-4 4-Bromofluorobenzene 2000 2040 ug/L 102 62 -130
 1868-53-7 Dibromofluoromethane 2000 2020 ug/L 101 65 -127
 2037-26-5 Toluene d8 2000 1980 ug/L 99 71 -134
 17060-07-0 1,2-Dichloroethane-d4 2000 1870 ug/L 94 62 -127
 SW-846 8270C TCLP
 Prep Date Prep Batch Prep Method Dilution Analyzed By Analytical Batch
 04/16/2010 08:00 429512 3510C 1 04/16/2010 15:32 KCB 429591
 CAS# Parameter Result RDL MDL Units
 106-46-7 1,4-Dichlorobenzene 0.0500U 0.0500 0.0006 mg/L
 95-95-4 2,4,5-Trichlorophenol 0.0500U 0.0500 0.0006 mg/L
 88-06-2 2,4,6-Trichlorophenol 0.0500U 0.0500 0.0008 mg/L
 121-14-2 2,4-Dinitrotoluene 0.0500U 0.0500 0.0012 mg/L
 1319-77-3 Cresols 0.1000U 0.1000 0.0024 mg/L
 118-74-1 Hexachlorobenzene 0.0500U 0.0500 0.0013 mg/L
 87-68-3 Hexachlorobutadiene 0.0500U 0.0500 0.0011 mg/L
 67-72-1 Hexachloroethane 0.0500U 0.0500 0.0055 mg/L
 98-95-3 Nitrobenzene 0.0500U 0.0500 0.0011 mg/L
 87-86-5 Pentachlorophenol 0.2500U 0.2500 0.0076 mg/L
 110-86-1 Pyridine 0.0500U 0.0500 0.0077 mg/L
 1319-77-3MP m,p-Cresol 0.0500U 0.0500 0.0017 mg/L
 95-48-7 o-Cresol 0.0500U 0.0500 0.0009 mg/L
 CAS# Surrogate Conc. Spiked Conc. Rec Units % Recovery Rec Limits
 4165-60-0 Nitrobenzene-d5 250 244 ug/L 98 48 -123
 321-60-8 2-Fluorobiphenyl 250 247 ug/L 99 16 -128
 1718-51-0 Terphenyl-d14 250 182 ug/L 73 38 -167
 4165-62-2 Phenol-d5 500 211 ug/L 42 10 -123
 367-12-4 2-Fluorophenol 500 313 ug/L 63 10 -120
 118-79-6 2,4,6-Tribromophenol 500 512 ug/L 102 44 -121

GCAL Report 210041229

GCAL ID
21004122912
Client ID
T22
Matrix
Solid
Collect Date/Time
04/07/2010 10:15
Receive Date/Time
04/09/2010 12:06
SW-846 6010B TCLP
Prep Date Prep Batch
04/15/2010 08:45 429507
Prep Method
SW-846 3010A
Dilution
1
Analyzed
04/15/2010 23:56
By
CLB
Analytical Batch
429524
CAS#
7440-38-2
7440-39-3
7440-43-9
7440-47-3
7439-92-1
7782-49-2
7440-22-4
Parameter
Arsenic
Barium
Cadmium
Chromium
Lead
Selenium
Silver
Result
0.20U
0.47B
0.010U
0.050U
0.0028B
0.041B
0.0036B
RDL
0.20
1.00
0.010
0.050
0.10
0.10
0.050
MDL
0.0030

0.00031
0.00016
0.00032
0.0015
0.0037
0.00058
Units
mg/L
mg/L
mg/L
mg/L
mg/L
mg/L
mg/L
mg/L
SW-846 7470A TCLP
Prep Date Prep Batch
04/15/2010 08:45 429508
Prep Method
SW-846 7470A
Dilution
1
Analyzed
04/15/2010 12:14
By
TEA
Analytical Batch
429521
CAS#
7439-97-6
Parameter
Mercury
Result
0.0020U
RDL
0.0020
MDL
0.000055
Units
mg/L
SW-846 1010 Flashpoint
Prep Date Prep Batch Prep Method Dilution
1
Analyzed
04/15/2010 13:42
By
MDT
Analytical Batch
429555
CAS#
000000-01-3
Parameter
FlashPoint
Result
>170
RDL
50
MDL

50
Units
Deg F
RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL Report 210041229

GC/MS Volatiles Quality Control Summary

Analytical Batch 429573 Client ID MB429573 LCS429573 LCSD429573
Prep Batch N/A GCAL ID
Sample Type
Analytical Date
Matrix
819322
Method Blank
04/15/2010 20:57
Water
819323
LCS
04/15/2010 19:11
Water
819324
LCSD
04/15/2010 19:34
Water
SW-846 8260B TCLP Units
Result
mg/L
RDL
Spike
Added
Result
% R
Control
Limits % R
Result
% R RPD
RPD
Limit
56-23-5 Carbon tetrachloride 0.00500U 0.00500 0.050 0.045 90 76 -128
0.048 97 6 30
67-66-3 Chloroform 0.00500U 0.00500 0.050 0.045 91 75 -122 0.049 99 9 30
107-06-2 1,2-Dichloroethane 0.00500U 0.00500 0.050 0.045 89 71 -129 0.048
96 6 30
78-93-3 2-Butanone 0.025U 0.025 0.050 0.042 84 58 -137 0.048 95 13 30
127-18-4 Tetrachloroethene 0.00500U 0.00500 0.050 0.048 95 68 -128 0.048
96 0 30
75-01-4 Vinyl chloride 0.00100U 0.00100 0.050 0.041 83 68 -132 0.046 92
11 30
75-35-4 1,1-Dichloroethene 0.00500U 0.00500 0.050 0.045 90 69 -129 0.046
91 2 20
71-43-2 Benzene 0.00500U 0.00500 0.050 0.046 91 70 -129 0.050 100 8 20
79-01-6 Trichloroethene 0.00500U 0.00500 0.050 0.048 96 76 -129 0.049 98
2 20
108-90-7 Chlorobenzene 0.00500U 0.00500 0.050 0.046 91 74 -123 0.052 103
12 20
Surrogate
460-00-4 4-Bromofluorobenzene 46.8 94 50 48.4 97 62 -130 45.9 92
1868-53-7 Dibromofluoromethane 49 98 50 49.4 99 65 -127 48.7 97
2037-26-5 Toluene d8 46.8 94 50 48.9 98 71 -134 44.5 89
17060-07-0 1,2-Dichloroethane-d4 46.2 92 50 48.8 98 62 -127 46 92

Analytical Batch 429573 Client ID T6 T6 MS T6 MSD
Prep Batch N/A GCAL ID
Sample Type
Analytical Date
Matrix
21004122903
SAMPLE
04/15/2010 21:35
Water
21004122904
MS
04/15/2010 22:42
Water
21004122905
MSD
04/15/2010 23:04
Water
SW-846 8260B TCLP Units
Result
mg/L
RDL
Spike
Added
Result
% R
Control
Limits % R
Result
% R RPD
RPD
Limit
75-35-4 1,1-Dichloroethene 0.00 0.500 5.00 4.26 85 69 -129 4.42 88 4 30
107-06-2 1,2-Dichloroethane 6.91 0.500 5.00 10.6 74 71 -129 9.17 45* 14
30
78-93-3 2-Butanone 0.00 2.50 5.00 3.58 72 58 -137 3.60 72 0.6 30
71-43-2 Benzene 0.802 0.500 5.00 5.24 89 70 -129 5.14 87 2 30
56-23-5 Carbon tetrachloride 0.00 0.500 5.00 4.24 85 76 -128 4.44 89 5 30
108-90-7 Chlorobenzene 0.00 0.500 5.00 4.40 88 74 -123 4.51 90 2 30
67-66-3 Chloroform 5.36 0.500 5.00 8.71 67* 75 -122 7.36 40* 17 30
127-18-4 Tetrachloroethene 0.00 0.500 5.00 4.64 93 68 -128 4.57 91 2 30
79-01-6 Trichloroethene 0.245 0.500 5.00 4.57 87 76 -129 4.45 84 3 30

GCAL Report 210041229

GC/MS Volatiles Quality Control Summary

Analytical Batch 429573

Prep Batch N/A

Client ID

GCAL ID

Sample Type

Analytical Date

Matrix

T6

21004122903

SAMPLE

04/15/2010 21:35

Water

T6 MS

21004122904

MS

04/15/2010 22:42

Water

T6 MSD

21004122905

MSD

04/15/2010 23:04

Water

SW-846 8260B TCLP Units

Result

mg/L

RDL

Spike

Added

Result

% R

Control

Limits % R

Result

% R RPD

RPD

Limit

75-01-4 Vinyl chloride 0.00 0.100 5.00 4.37 87 68 -132 4.34 87 0.7 30

Surrogate

460-00-4 4-Bromofluorobenzene 5020 100 5000 5030 101 62 -130 4910 98

1868-53-7 Dibromofluoromethane 5010 100 5000 4800 96 65 -127 4990 100

2037-26-5 Toluene d8 5010 100 5000 4980 100 71 -134 5100 102

17060-07-0 1,2-Dichloroethane-d4 4600 92 5000 4610 92 62 -127 4660 93

GCAL Report 210041229

GC/MS Semi-Volatiles Quality Control Summary

Analytical Batch 429591 Client ID MB429512 LCS429512 LCSD429512
Prep Batch 429512 GCAL ID 818949 818950 818951
Prep Method 3510C Sample Type
Prep Date
Analytical Date
Matrix
Method Blank
04/16/2010 08:00
04/16/2010 13:10
Water
LCS
04/16/2010 08:00
04/16/2010 13:25
Water
LCSD
04/16/2010 08:00
04/16/2010 13:41
Water
SW-846 8270C TCLP Units
Result
mg/L
RDL
Spike
Added
Result
% R
Control
Limits % R
Result
% R RPD
RPD
Limit
118-74-1 Hexachlorobenzene 0.0500U 0.0500
87-68-3 Hexachlorobutadiene 0.0500U 0.0500
67-72-1 Hexachloroethane 0.0500U 0.0500
95-48-7 o-Cresol 0.0500U 0.0500
98-95-3 Nitrobenzene 0.0500U 0.0500
95-95-4 2,4,5-Trichlorophenol 0.0500U 0.0500
88-06-2 2,4,6-Trichlorophenol 0.0500U 0.0500
110-86-1 Pyridine 0.0500U 0.0500
1319-77-3 Cresols 0.1000U 0.1000
1319-77-3MP m,p-Cresol 0.0500U 0.0500
106-46-7 1,4-Dichlorobenzene 0.0500U 0.0500 0.100 0.095 95 22 -120 0.086
86 10 30
121-14-2 2,4-Dinitrotoluene 0.0500U 0.0500 0.100 0.110 110 37 -138 0.108
108 2 33
87-86-5 Pentachlorophenol 0.2500U 0.2500 0.100 0.070 70 25 -158 0.074 74
6 32
Surrogate
4165-60-0 Nitrobenzene-d5 41.5 83 50 50.5 101 48 -123 47.4 95
321-60-8 2-Fluorobiphenyl 40.6 81 50 50.6 101 16 -128 44.6 89
1718-51-0 Terphenyl-d14 31.8 64 50 39.2 78 38 -167 36.6 73
4165-62-2 Phenol-d5 28.8 29 100 35.4 35 10 -123 33.2 33
367-12-4 2-Fluorophenol 44.5 45 100 52.2 52 10 -120 45.7 46

118-79-6 2,4,6-Tribromophenol 93.8 94 100 112 112 44 -121 106 106

Analytical Batch 429591
Prep Batch 429512
Prep Method 3510C
Client ID
GCAL ID
Sample Type
Prep Date
Analytical Date
Matrix
T6
21004122903
SAMPLE
04/16/2010 08:00
04/16/2010 14:28
Water
T6 MS
21004122904
MS
04/16/2010 08:00
04/16/2010 14:44
Water
T6 MSD
21004122905
MSD
04/16/2010 08:00
04/16/2010 15:00
Water
SW-846 8270C TCLP Units
Result
mg/L
RDL
Spike
Added
Result
% R
Control
Limits % R
Result
% R RPD
RPD
Limit
106-46-7 1,4-Dichlorobenzene 0.00 0.0500 0.500 0.414 83 22 -120 0.470 94
13 30
121-14-2 2,4-Dinitrotoluene 0.00 0.0500 0.500 0.527 105 37 -138 0.527 105
0 33

GCAL Report 210041229

GC/MS Semi-Volatiles Quality Control Summary

Analytical Batch 429591 Client ID T6 T6 MS T6 MSD
Prep Batch 429512 GCAL ID 21004122903 21004122904 21004122905
Prep Method 3510C Sample Type
Prep Date
Analytical Date
Matrix
SAMPLE
04/16/2010 08:00
04/16/2010 14:28
Water
MS
04/16/2010 08:00
04/16/2010 14:44
Water
MSD
04/16/2010 08:00
04/16/2010 15:00
Water
SW-846 8270C TCLP Units
Result
mg/L
RDL
Spike
Added
Result
% R
Control
Limits % R
Result
% R RPD
RPD
Limit
87-86-5 Pentachlorophenol 0.00 0.2500 0.500 0.403 81 25 -158 0.424 85 5
32
Surrogate
4165-60-0 Nitrobenzene-d5 218 87 250 229 92 48 -123 244 98
321-60-8 2-Fluorobiphenyl 212 85 250 239 96 16 -128 245 98
1718-51-0 Terphenyl-d14 174 70 250 182 73 38 -167 181 72
4165-62-2 Phenol-d5 227 45 500 219 44 10 -123 222 44
367-12-4 2-Fluorophenol 311 62 500 287 57 10 -120 307 61
118-79-6 2,4,6-Tribromophenol 496 99 500 532 106 44 -121 512 102

GCAL Report 210041229

General Chromatography Quality Control Summary

Analytical Batch 429750
Prep Batch 429379
Prep Method TNRCC 1005
Client ID
GCAL ID
Sample Type
Prep Date
Analytical Date
Matrix
MB429379
818201
Method Blank
04/16/2010 14:00
04/16/2010 14:07
Water
LCS429379
818202
LCS
04/16/2010 14:00
04/16/2010 14:37
Water
LCSD429379
818203
LCSD
04/16/2010 14:00
04/16/2010 15:08
Water
TX1005 Hydrocarbons by Range Units
Result
ug/L
RDL
Spike
Added
Result
% R
Control
Limits % R
Result
% R RPD
RPD
Limit
GCSV-05-01 C6-C12 142U 142
GCSV-05-02 >C12-C28 142U 142
GCSV-05-03 >C28-C35 142U 142
GCSV-05-04 Total TPH (C6-C35) 142U 142 57700 47400 82 75 -125 45200 78 5
20
Surrogate
84-15-1 o-Terphenyl 20300 128 16000 18600 116 58 -148 17000 105

Analytical Batch 429794
Prep Batch 429379
Prep Method TNRCC 1005
Client ID
GCAL ID

Sample Type
Prep Date
Analytical Date
Matrix
T6
21004122903
SAMPLE
04/16/2010 14:00
04/20/2010 11:18
Water
T6 MS
21004122904
MS
04/16/2010 14:00
04/20/2010 11:47
Water
T6 MSD
21004122905
MSD
04/16/2010 14:00
04/19/2010 18:19
Water
TX1005 Hydrocarbons by Range Units
Result
ug/L
RDL
Spike
Added
Result
% R
Control
Limits % R
Result
% R RPD
RPD
Limit
GCSV-05-04 Total TPH (C6-C35) 0.00 145 59800 51600 86 75 -125 51400 86
0.4 20
Surrogate
84-15-1 o-Terphenyl 18000 112 16600 19800 119 58 -148 20800 126

GCAL Report 210041229

Inorganics Quality Control Summary

Analytical Batch 429524
Prep Batch 429492
Prep Method SW-846
3010A
Client ID
GCAL ID
Sample Type
Prep Date
Analytical Date
Matrix
MB429492
818811
Method Blank
04/15/2010 08:45
04/15/2010 20:21
Water
LCS429492
818812
LCS
04/15/2010 08:45
04/15/2010 20:42
Water
SW-846 6010B TCLP Units mg/L
Result RDL
Spike
Added
Result
% R
Control
Limits % R
7440-36-0 Antimony 0.060U 0.060 0.50 0.50 100 80 -120
7440-38-2 Arsenic 0.20U 0.20 0.50 0.54 107 80 -120
7440-39-3 Barium 1.00U 1.00 0.50 0.53 106 80 -120
7440-41-7 Beryllium 0.0050U 0.0050 0.50 0.52 104 80 -120
7440-43-9 Cadmium 0.010U 0.010 0.50 0.53 106 80 -120
7440-47-3 Chromium 0.00091B 0.050 0.50 0.53 106 80 -120
7439-92-1 Lead 0.10U 0.10 0.50 0.54 109 80 -120
7440-02-0 Nickel 0.040U 0.040 0.50 0.53 106 80 -120
7782-49-2 Selenium 0.10U 0.10 0.50 0.53 106 80 -120
7440-22-4 Silver 0.050U 0.050 0.50 0.53 106 80 -120

Analytical Batch 429524
Prep Batch 429507
Prep Method SW-846
3010A
Client ID
GCAL ID
Sample Type
Prep Date
Analytical Date
Matrix
MB429507
818922
Method Blank

04/15/2010 08:45
04/15/2010 23:28
Water
LCS429507
818923
LCS
04/15/2010 08:45
04/15/2010 23:35
Water
SW-846 6010B TCLP Units
Result
mg/L
RDL
Spike
Added
Result
% R
Control
Limits % R
7440-38-2 Arsenic 0.20U 0.20 0.50 0.51 102 80 -120
7440-39-3 Barium 0.0012B 1.00 0.50 0.50 99 80 -120
7440-43-9 Cadmium 0.010U 0.010 0.50 0.52 104 80 -120
7440-47-3 Chromium 0.050U 0.050 0.50 0.50 99 80 -120
7439-92-1 Lead 0.10U 0.10 0.50 0.50 99 80 -120
7782-49-2 Selenium 0.032B 0.10 0.50 0.59 118 80 -120
7440-22-4 Silver 0.0030B 0.050 0.50 0.51 102 80 -120

GCAL Report 210041229

Inorganics Quality Control Summary

Analytical Batch 429524

Prep Batch 429492

Prep Method SW-846

3010A

Client ID

GCAL ID

Sample Type

Prep Date

Analytical Date

Matrix

T6

21004122903

SAMPLE

04/15/2010 08:45

04/15/2010 20:48

Water

T6 MS

21004122904

MS

04/15/2010 08:45

04/15/2010 20:55

Water

T6 MSD

21004122905

MSD

04/15/2010 08:45

04/15/2010 21:02

Water

SW-846 6010B TCLP Units

Result

mg/L

RDL

Spike

Added

Result

% R

Control

Limits % R

Result

% R RPD

RPD

Limit

7440-36-0 Antimony 0.0 0.060 0.50 0.47 94 75 -125 0.49 98 4 20

7440-38-2 Arsenic 0.016 0.20 0.50 0.53 102 75 -125 0.55 106 4 20

7440-39-3 Barium 2.42 1.00 0.50 2.82 80 75 -125 2.99 115 6 20

7440-41-7 Beryllium 0.0 0.0050 0.50 0.49 98 75 -125 0.51 101 4 20

7440-43-9 Cadmium 0.0058 0.010 0.50 0.49 97 75 -125 0.51 100 4 20

7440-47-3 Chromium 0.0021 0.050 0.50 0.49 97 75 -125 0.50 100 2 20

7439-92-1 Lead 0.013 0.10 0.50 0.49 96 75 -125 0.51 100 4 20

7440-02-0 Nickel 0.50 0.040 0.50 0.96 92 75 -125 1.01 102 5 20

7782-49-2 Selenium 0.0 0.10 0.50 0.50 100 75 -125 0.51 102 2 20

7440-22-4 Silver 0.0 0.050 0.50 0.49 98 75 -125 0.51 103 4 20

Analytical Batch 429524

Prep Batch 429507
Prep Method SW-846
3010A
Client ID
GCAL ID
Sample Type
Prep Date
Analytical Date
Matrix
MARCH 2010 CHIP SAMPLE
21004122401
SAMPLE
04/15/2010 08:45
04/15/2010 22:04
Solid
817987MS
818925
MS
04/15/2010 08:45
04/15/2010 22:11
Solid
817987MSD
818924
MSD
04/15/2010 08:45
04/15/2010 22:18
Solid
SW-846 6010B TCLP Units mg/L
Result RDL
Spike
Added
Result
% R
Control
Limits % R
Result
% R RPD
RPD
Limit
7440-38-2 Arsenic 0.0 0.20 0.50 0.52 103 75 -125 0.51 102 2 20
7440-39-3 Barium 0.21 1.00 0.50 0.71 101 75 -125 0.72 102 1 20
7440-43-9 Cadmium 0.00041 0.010 0.50 0.53 105 75 -125 0.52 105 2 20
7440-47-3 Chromium 0.0 0.050 0.50 0.50 101 75 -125 0.50 101 0 20
7439-92-1 Lead 2.55 0.10 0.50 3.06 102 75 -125 3.07 104 0.3 20
7782-49-2 Selenium 0.020 0.10 0.50 0.60 116 75 -125 0.58 113 3 20
7440-22-4 Silver 0.048 0.050 0.50 0.57 105 75 -125 0.58 106 2 20

GCAL Report 210041229

Inorganics Quality Control Summary

Analytical Batch 429521
Prep Batch 429494
Prep Method SW-846
7470A
Client ID
GCAL ID
Sample Type
Prep Date
Analytical Date
Matrix
MB429494
818820
Method Blank
04/15/2010 08:45
04/15/2010 11:53
Water
LCS429494
818821
LCS
04/15/2010 08:45
04/15/2010 11:55
Water
SW-846 7470A TCLP Units
Result
mg/L
RDL
Spike
Added
Result
% R
Control
Limits % R
7439-97-6 Mercury 0.0020U 0.0020 0.00500 0.00504 101 80 -120

Analytical Batch 429521
Prep Batch 429508
Prep Method SW-846
7470A
Client ID
GCAL ID
Sample Type
Prep Date
Analytical Date
Matrix
MB429508
818928
Method Blank
04/15/2010 08:45
04/15/2010 12:08
Water
LCS429508
818929
LCS
04/15/2010 08:45

04/15/2010 12:13
Water
SW-846 7470A TCLP Units
Result
mg/L
RDL
Spike
Added
Result
% R
Control
Limits % R
7439-97-6 Mercury 0.0020U 0.0020 0.00500 0.00482 96 80 -120

Analytical Batch 429521

Prep Batch 429494

Prep Method SW-846

7470A

Client ID

GCAL ID

Sample Type

Prep Date

Analytical Date

Matrix

T6

21004122903

SAMPLE

04/15/2010 08:45

04/15/2010 11:56

Water

T6 MS

21004122904

MS

04/15/2010 08:45

04/15/2010 11:58

Water

T6 MSD

21004122905

MSD

04/15/2010 08:45

04/15/2010 12:00

Water

SW-846 7470A TCLP Units

Result

mg/L

RDL

Spike

Added

Result

% R

Control

Limits % R

Result

% R RPD

RPD

Limit

7439-97-6 Mercury 0.00011 0.0020 0.00500 0.00527 103 75 -125 0.00526 103
0.2 20

GCAL Report 210041229

Inorganics Quality Control Summary

Analytical Batch 429521
Prep Batch 429508
Prep Method SW-846
7470A
Client ID
GCAL ID
Sample Type
Prep Date
Analytical Date
Matrix
T22
21004122912
SAMPLE
04/15/2010 08:45
04/15/2010 12:14
Solid
818046MS
818930
MS
04/15/2010 08:45
04/15/2010 12:16
Solid
818046MSD
818931
MSD
04/15/2010 08:45
04/15/2010 12:17
Solid
SW-846 7470A TCLP Units
Result
mg/L
RDL
Spike
Added
Result
% R
Control
Limits % R
Result
% R RPD
RPD
Limit
7439-97-6 Mercury 0.00000 0.0020 0.00500 0.00512 102 75 -125 0.00508 102
0.8 20

GCAL Report 210041229

General Chemistry Quality Control Summary

Analytical Batch 429555
Prep Batch N/A
Client ID
GCAL ID
Sample Type
Analytical Date
Matrix
LCS429555
820399
LCS
04/15/2010 13:42
Solid
SW-846 1010 Flashpoint Spike
Added
Result
% R
Control
Limits % R
000000-01-3 FlashPoint 90 91 101 97.8 -102.2

GCAL Report 210041229

General Chemistry Quality Control Summary

Analytical Batch 429780

Prep Batch 429779

Prep Method EPA 1010

Client ID

GCAL ID

Sample Type

Prep Date

Analytical Date

Matrix

OIL BURN

21004091501

SAMPLE

04/20/2010 08:00

04/20/2010 08:00

Solid

817500DUP

820745

DUP

04/20/2010 08:00

04/20/2010 08:00

Solid

ASTM D240 Heat of Combustion Units

Result

BTU/lb

RDL

Result

RPD

RPD

Limit

WET-014 Heat of Combustion 14197 90 13388 6 25

GCAL Report 210041229

General Chemistry Quality Control Summary

Analytical Batch 429420

Prep Batch N/A

Client ID

GCAL ID

Sample Type

Analytical Date

Matrix

126127

21004061901

SAMPLE

04/13/2010 09:38

Solid

816248DUP

818415

DUP

04/13/2010 09:38

Solid

ASTM E203-96 WaterK Units

Result

%

RDL

Result

RPD

RPD

Limit

W-02-8 Karl Fisher H2O 11.2 0.100 11.7 4.37 25

GCAL Report 210041229

DATA VALIDATION CHECKLIST

(Level III)

Client Name: Pastor, Behling, & Wheeler Project Number: 1597B

Property Location: Gulfco Superfund Site Project Manager: Eric Pastor

Laboratory: GCAL - Baton Rouge, LA Laboratory Job No.: 211011405

Reviewer: Taryn Scholz/ Don Flory (QAA, L.L.C.) Date Checked: 2/22/11

ITEM Yes No NA Comment Number

Chain of Custody (COC) and Sample Receipt at Lab

1. Signed COCs included and seals used?

2. Date and time of sample collection included?

3. All samples listed on the COC analyzed for in accordance with
the RI/FS Work Plan?

4. Field QC sample frequency met project requirements?

5. Sample receipt temperature 2-6°C?

6. Samples preserved appropriately?

7. Samples received within 2 days of collection?

8. No problems noted?

Laboratory Report and Data Package

9. Signed Case Narrative included?

10. No analytical discrepancies noted in case narrative? 10.

11. Elevated reporting limits justified? 11.

12. MDLs reasonable per MDL Check?

13. Calibration data acceptable? see Attachment 1

14. ICV and CCV recoveries within project control limits? see
Attachment 1

15. ICB and CCB results <RL (MQL)?

16. Internal standard areas within project control limits?

Laboratory EDD

17. Field sample IDs included?

18. Laboratory sample IDs included?

19. Date of analysis included?

20. Date of sample preparation included? 20.

21. Samples prepared within holding time?

22. Samples analyzed within holding time?

23. Detection limit and quantitation limit included?

24. Project target limits achieved? 24.

25. No elevated reporting limits for NDs? 25.

26. Method references included?

27. Sample matrix included?

28. Sample result units reported correctly? 28.

29. Soil/ sediment results corrected for dry-weight?

30. Method blank results <RL (MDL)?

31. Equipment and Trip blank results <RL (MDL)?

32. All COIs included in LCS? 32.

33. LCS recovery within project control limits? see Attachment 1

34. MS/MSD recoveries within project control limits? see Attachment 1

35. LCS/LCSD RPDs within project control limits? see Attachment 1

36. MS/MSD RPDs within project control limits? see Attachment 1

37. Laboratory duplicate RPDs/Diffs within project control limits?

38. Field duplicate RPDs/Diffs within project control limits? see
Attachment 1

39. Surrogate recoveries within project control limits? see Attachment
1

40. Completeness percentage within project limits?

Definitions:

CCB - Continuing Calibration Blank; CCV - Continuing Calibration Verification; COI - Compounds of Interest; DCS - Detectability Check Sample; ICB - Initial Calibration Blank; ICV - Initial Calibration Verification; LCS - Laboratory Control Sample; LCSD - Laboratory Control Sample Duplicate; MDL - Method Detection Limit; MS/MSD - Matrix Spike/Matrix Spike Duplicate; RL - Reporting Limit; RPD - Relative Percent Difference

COMMENTS

Level IV Check - GC/MS RRF for instrument calibration also included in Level III checks after deficiencies noted in first samples - see attached for deficiencies noted

10. Issues noted for all parameters. All are based on laboratory limits, which do not affect flagging for this site.

11. All VOC soil samples diluted (med level MeOH extraction and higher) to bracket TA concentrations in calibration range; SVOC sample 04 diluted (10x) to bracket a TA concentration in calibration range, SUs diluted out for this analysis (undiluted analysis also reported and it has acceptable surrogate recoveries)

20. Note: QC Batch ID in EDD is for the analytical batch rather than the preparation batch as given for all previous EDDs.

24. Actual MDLs are above the target MDLs for the following:

Target MDL (mg/kg) Actual MDL (mg/kg)

n-Butyl alcohol 0.0083 0.0183

Benzidine 0.067 1.65

Actual MQLs are above the target MQLs for the following:

Target MQL (mg/kg) Actual MQL (mg/kg)

Benzidine 1.32 1.65

(Note: For n-Butyl alcohol, both the actual MDL and target MDL are below the comparison criteria. For Benzidine, neither the actual MDL nor the target MDL is below the comparison criteria, which is exceedingly low.)

25. The VOC soil samples were analyzed as high level soils (50x dilution), some with additional dilution (up to 200x) for non-detects.

28. Results, SDLs, and SQLs are in mg/kg dry-weight or mg/L as requested. However, the user should note that the MDLs and MQLs for organics are in ug/kg or ug/L. This is not accounted for in the Prep Factor or Dilution Factor, except for aqueous SVOC results.

32. All analytes routinely spiked by lab are included as per QAPP. This is every TA except n-Butyl alcohol and Benzidine.

SET SUMMARY

Laboratory Job No.: 211021405

11 Number of Field Samples including Field Duplicates (1)
1 Number of Field MS/MSD Pairs
1 Number of Equipment Rinsate Blanks
0 Number of Field Blanks
2 Number of VOC Trip Blanks
2 Number of Parameters (VOC, SVOC)
145 Number of Target Analytes per Sample
1595 Total Measurements for Field Samples
1311 Number of measurements with no validation qualifier (i.e., "none" in EDD)
93 Number of measurements with UJ flag (for various analytes due to low laboratory and/or matrix spike recovery; poor calibration fit and/or negative drift)
32 Number of measurements with UJ flag and an elevated SDL (for 2-Chloroethylvinyl ether, Acrolein, and n-Butyl alcohol due to poor instrument response, i.e., low RRF)
0 Number of measurements with J- flag
120 Number of measurements with J flag (due solely to result being between the SDL and SQL)
23 Number of measurements with J flag (for 2-Methylnaphthalene, Acenaphthylene, and Isopropylbenzene (Cumene) due to poor field duplicate precision)
4 Number of measurements with J flag (for Pyrene due to result being between the SDL and SQL plus calibration positive drift)
1 Number of measurements with J+ flag (for Pyrene due to calibration positive drift)
0 Number of measurements with U flag
0 Number of measurements with NS flag
11 Number of measurements with R flag (for Benzaldehyde due to extremely low laboratory spike recovery (8.5%), low matrix spike recovery, and calibration negative drift)
100% Completeness-to-date on a sample level (percentage of removal verification samples with usable data, project goal 90%)
0% Completeness-to-date on an analyte level (percentage of removal verification samples with usable data for a specific analyte, project goal 80%) - Benzaldehyde
100% Completeness-to-date on an analyte level (percentage of removal verification samples with usable data for a specific analyte, project goal 80%) - all other target analytes

Usability:

All data is suitable as qualified for the intended use except the eleven results for Benzaldehyde (all non-detects). Data for 2-Chloroethylvinyl ether, Acrolein, and n-Butyl alcohol are usable with an elevated reporting limit for the non-detects (as given in the Electronic Data Deliverable).

QUALIFIED DATA TABLE

Field Sample
Identification
Analyte Data
Qualifier Reason for Qualification
BLIND DUP 2-Chloroethylvinyl ether UJ low instrument response (low RRF),
elevate SDL for NDs 210x
(RV)
BLIND DUP Acrolein UJ low instrument response (low RRF), elevate SDL for
NDs 50x
(RV); Low ave MS/MSD recovery (13.5%)
BLIND DUP Benzene J result between SDL and SQL
BLIND DUP Isopropylbenzene (Cumene) J poor field duplicate precision (57
RPD)
BLIND DUP Naphthalene J result between SDL and SQL
BLIND DUP n-Butyl alcohol UJ low instrument response (low RRF), elevate
SDL for NDs 3x (RV)
BLIND DUP Styrene J result between SDL and SQL
BLIND DUP Toluene J result between SDL and SQL
BLIND DUP Xylene (total) J result between SDL and SQL
BLIND DUP 2,4-Dinitrophenol UJ poor calibration fit (%RSD=31); Low ave
MS/MSD recovery
(58.5%)
BLIND DUP 2-Methylnaphthalene J poor field duplicate precision (74 RPD)
BLIND DUP 3,3'-Dichlorobenzidine UJ Low ave LCS/LCSD recovery (40.5%)
BLIND DUP 3-Nitroaniline UJ Low ave LCS/LCSD recovery (38.5%); Low ave
MS/MSD
recovery (55.5%)
BLIND DUP 4-Chloroaniline UJ Low ave LCS/LCSD recovery (26.5%); Low ave
MS/MSD
recovery (45%)
BLIND DUP Acenaphthylene J large difference between field duplicate pair
BLIND DUP Aniline UJ Low ave LCS/LCSD recovery (45.5%)
BLIND DUP Anthracene J result between SDL and SQL
BLIND DUP Benzaldehyde R Extremely low ave LCS/LCSD recovery (8.5%); Low
ave
MS/MSD recovery (9%); calibration drift (%D= -27)
BLIND DUP Benzidine UJ poor calibration fit (%RSD=39); calibration drift
(%D= -24)
BLIND DUP Benzoic acid UJ calibration drift (%D= -21); Low ave MS/MSD
recovery (51.5%)
BLIND DUP Biphenyl J result between SDL and SQL
BLIND DUP Diethyl phthalate J result between SDL and SQL
BLIND DUP Fluoranthene J result between SDL and SQL
BLIND DUP m,p-Cresol J result between SDL and SQL
BLIND DUP o-Cresol J result between SDL and SQL
BLIND DUP Pyridine UJ Low ave MS/MSD recovery (59%)
NC-0-0.3 1,1,1-Trichloroethane J result between SDL and SQL
NC-0-0.3 1,2,4-Trimethylbenzene J result between SDL and SQL
NC-0-0.3 1,3,5-Trimethylbenzene J result between SDL and SQL
NC-0-0.3 2-Chloroethylvinyl ether UJ low instrument response (low RRF),
elevate SDL for NDs 210x
(RV)

NC-0-0.3 Acrolein UJ low instrument response (low RRF), elevate SDL for NDs 50x
(RV); Low ave MS/MSD recovery (13.5%)
NC-0-0.3 Benzene J result between SDL and SQL
NC-0-0.3 Cyclohexane J result between SDL and SQL
NC-0-0.3 Isopropylbenzene (Cumene) J poor field duplicate precision (57 RPD)
NC-0-0.3 m,p-Xylene J result between SDL and SQL
NC-0-0.3 Methylene chloride J result between SDL and SQL
NC-0-0.3 n-Butyl alcohol UJ low instrument response (low RRF), elevate SDL for NDs 3x (RV)
NC-0-0.3 o-Xylene J result between SDL and SQL
NC-0-0.3 Toluene J result between SDL and SQL
NC-0-0.3 Xylene (total) J result between SDL and SQL
NC-0-0.3 2,4-Dinitrophenol UJ poor calibration fit (%RSD=31); Low ave MS/MSD recovery (58.5%)
NC-0-0.3 2-Methylnaphthalene J poor field duplicate precision (74 RPD)
NC-0-0.3 3,3'-Dichlorobenzidine UJ Low ave LCS/LCSD recovery (40.5%)

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QUALIFIED DATA TABLE

Field Sample
Identification
Analyte Data
Qualifier Reason for Qualification
NC-0-0.3 3-Nitroaniline UJ Low ave LCS/LCSD recovery (38.5%); Low ave MS/MSD recovery (55.5%)
NC-0-0.3 4-Chloroaniline UJ Low ave LCS/LCSD recovery (26.5%); Low ave MS/MSD recovery (45%)
NC-0-0.3 Acenaphthene J result between SDL and SQL
NC-0-0.3 Acenaphthylene J large difference between field duplicate pair (> 3 x MQL); result between SDL and SQL
NC-0-0.3 Acetophenone J result between SDL and SQL
NC-0-0.3 Aniline UJ Low ave LCS/LCSD recovery (45.5%)
NC-0-0.3 Benzaldehyde R Extremely low ave LCS/LCSD recovery (8.5%); Low ave MS/MSD recovery (9%); calibration drift (%D= -27)
NC-0-0.3 Benzidine UJ poor calibration fit (%RSD=39); calibration drift (%D= -24)
NC-0-0.3 Benzo(b)fluoranthene J result between SDL and SQL
NC-0-0.3 Benzo(g,h,i)perylene J result between SDL and SQL
NC-0-0.3 Benzo(k)fluoranthene J result between SDL and SQL
NC-0-0.3 Benzoic acid UJ calibration drift (%D= -21); Low ave MS/MSD recovery (51.5%)
NC-0-0.3 Biphenyl J result between SDL and SQL
NC-0-0.3 Chrysene J result between SDL and SQL
NC-0-0.3 Indeno(1,2,3-cd)pyrene J result between SDL and SQL
NC-0-0.3 Pyrene J calibration drift (%D= 27); result between SDL and SQL
NC-0-0.3 Pyridine UJ Low ave MS/MSD recovery (59%)
SC-E 1,2,4-Trimethylbenzene J result between SDL and SQL
SC-E 2-Chloroethylvinyl ether UJ low instrument response (low RRF), elevate SDL for NDs 210x
(RV)
SC-E Acrolein UJ low instrument response (low RRF), elevate SDL for NDs 50x
(RV); Low ave MS/MSD recovery (13.5%)
SC-E Cyclohexane J result between SDL and SQL
SC-E Ethylbenzene J result between SDL and SQL
SC-E Isopropylbenzene (Cumene) J poor field duplicate precision (57 RPD)
SC-E m,p-Xylene J result between SDL and SQL
SC-E Naphthalene J result between SDL and SQL
SC-E n-Butyl alcohol UJ low instrument response (low RRF), elevate SDL for NDs 3x (RV)
SC-E o-Xylene J result between SDL and SQL
SC-E Xylene (total) J result between SDL and SQL
SC-E 2,4-Dinitrophenol UJ poor calibration fit (%RSD=31); Low ave MS/MSD recovery (58.5%)
SC-E 2-Methylnaphthalene J poor field duplicate precision (74 RPD); result between SDL and SQL
SC-E 3,3'-Dichlorobenzidine UJ Low ave LCS/LCSD recovery (40.5%)

SC-E 3-Nitroaniline UJ Low ave LCS/LCSD recovery (38.5%); Low ave MS/MSD recovery (55.5%)
SC-E 4-Chloroaniline UJ Low ave LCS/LCSD recovery (26.5%); Low ave MS/MSD recovery (45%)
SC-E Acenaphthylene UJ large difference between field duplicate pair (> 3 x MQL)
SC-E Aniline UJ Low ave LCS/LCSD recovery (45.5%)
SC-E Anthracene J result between SDL and SQL
SC-E Benzaldehyde R Extremely low ave LCS/LCSD recovery (8.5%); Low ave MS/MSD recovery (9%); calibration drift (%D= -27)
SC-E Benzidine UJ poor calibration fit (%RSD=39); calibration drift (%D= -24)
SC-E Benzo(a)anthracene J result between SDL and SQL
SC-E Benzo(a)pyrene J result between SDL and SQL
SC-E Benzo(b)fluoranthene J result between SDL and SQL
SC-E Benzo(g,h,i)perylene J result between SDL and SQL
SC-E Benzo(k)fluoranthene J result between SDL and SQL

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QUALIFIED DATA TABLE

Field Sample
Identification
Analyte Data
Qualifier Reason for Qualification
SC-E Benzoic acid UJ calibration drift (%D= -21); Low ave MS/MSD recovery (51.5%)
SC-E Chrysene J result between SDL and SQL
SC-E Fluoranthene J result between SDL and SQL
SC-E Fluorene J result between SDL and SQL
SC-E Indeno(1,2,3-cd)pyrene J result between SDL and SQL
SC-E Phenanthrene J result between SDL and SQL
SC-E Pyrene J calibration drift (%D= 27); result between SDL and SQL
SC-E Pyridine UJ Low ave MS/MSD recovery (59%)
SC-W 1,2,4-Trimethylbenzene J result between SDL and SQL
SC-W 1,3,5-Trimethylbenzene J result between SDL and SQL
SC-W 2-Chloroethylvinyl ether UJ low instrument response (low RRF), elevate SDL for NDs 210x
(RV)
SC-W Acrolein UJ low instrument response (low RRF), elevate SDL for NDs 50x
(RV); Low ave MS/MSD recovery (13.5%)
SC-W Benzene J result between SDL and SQL
SC-W Cyclohexane J result between SDL and SQL
SC-W Ethylbenzene J result between SDL and SQL
SC-W Isopropylbenzene (Cumene) J poor field duplicate precision (57 RPD)
SC-W m,p-Xylene J result between SDL and SQL
SC-W Naphthalene J result between SDL and SQL
SC-W n-Butyl alcohol UJ low instrument response (low RRF), elevate SDL for NDs 3x (RV)
SC-W o-Xylene J result between SDL and SQL
SC-W Xylene (total) J result between SDL and SQL
SC-W 2,4-Dinitrophenol UJ poor calibration fit (%RSD=31); Low ave MS/MSD recovery (58.5%)
SC-W 3,3'-Dichlorobenzidine UJ Low ave LCS/LCSD recovery (40.5%)
SC-W 3-Nitroaniline UJ Low ave LCS/LCSD recovery (38.5%); Low ave MS/MSD recovery (55.5%)
SC-W 4-Chloroaniline UJ Low ave LCS/LCSD recovery (26.5%); Low ave MS/MSD recovery (45%)
SC-W Acenaphthylene J large difference between field duplicate pair (> 3 x MQL); result between SDL and SQL
SC-W Aniline UJ Low ave LCS/LCSD recovery (45.5%)
SC-W Anthracene J result between SDL and SQL
SC-W Benzaldehyde R Extremely low ave LCS/LCSD recovery (8.5%); Low ave MS/MSD recovery (9%); calibration drift (%D= -27)
SC-W Benzidine UJ poor calibration fit (%RSD=39); calibration drift (%D= -24)
SC-W Benzo(b)fluoranthene J result between SDL and SQL
SC-W Benzo(g,h,i)perylene J result between SDL and SQL
SC-W Benzo(k)fluoranthene J result between SDL and SQL
SC-W Benzoic acid UJ calibration drift (%D= -21); Low ave MS/MSD recovery (51.5%)
SC-W Chrysene J result between SDL and SQL

SC-W Diethyl phthalate J result between SDL and SQL
SC-W Fluoranthene J result between SDL and SQL
SC-W Indeno(1,2,3-cd)pyrene J result between SDL and SQL
SC-W Pyrene J calibration drift (%D= 27); result between SDL and SQL
SC-W Pyridine UJ Low ave MS/MSD recovery (59%)
T-15-F 2-Chloroethylvinyl ether UJ low instrument response (low RRF),
elevate SDL for NDs 210x
(RV)
T-15-F Acrolein UJ low instrument response (low RRF), elevate SDL for NDs
50x
(RV); Low ave MS/MSD recovery (13.5%)
T-15-F cis-1,2-Dichloroethene J result between SDL and SQL
T-15-F n-Butyl alcohol UJ low instrument response (low RRF), elevate SDL
for NDs 3x (RV)
T-15-F Trichloroethene J result between SDL and SQL

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QUALIFIED DATA TABLE

Field Sample
Identification
Analyte Data
Qualifier Reason for Qualification
T-15-F 2,4-Dinitrophenol UJ poor calibration fit (%RSD=31); Low ave MS/MSD recovery (58.5%)
T-15-F 3,3'-Dichlorobenzidine UJ Low ave LCS/LCSD recovery (40.5%)
T-15-F 3-Nitroaniline UJ Low ave LCS/LCSD recovery (38.5%); Low ave MS/MSD recovery (55.5%)
T-15-F 4-Chloroaniline UJ Low ave LCS/LCSD recovery (26.5%); Low ave MS/MSD recovery (45%)
T-15-F Acenaphthylene UJ large difference between field duplicate pair (> 3 x MQL)
T-15-F Aniline UJ Low ave LCS/LCSD recovery (45.5%)
T-15-F Benzaldehyde R Extremely low ave LCS/LCSD recovery (8.5%); Low ave MS/MSD recovery (9%); calibration drift (%D= -27)
T-15-F Benzidine UJ poor calibration fit (%RSD=39); calibration drift (%D= -24)
T-15-F Benzoic acid UJ calibration drift (%D= -21); Low ave MS/MSD recovery (51.5%)
T-15-F Fluoranthene J result between SDL and SQL
T-15-F Pyridine UJ Low ave MS/MSD recovery (59%)
T-21-F 1,2,4-Trimethylbenzene J result between SDL and SQL
T-21-F 2-Chloroethylvinyl ether UJ low instrument response (low RRF), elevate SDL for NDs 210x (RV)
T-21-F Acrolein UJ low instrument response (low RRF), elevate SDL for NDs 50x (RV); Low ave MS/MSD recovery (13.5%)
T-21-F cis-1,2-Dichloroethene J result between SDL and SQL
T-21-F Cyclohexane J result between SDL and SQL
T-21-F Hexachlorobutadiene J result between SDL and SQL
T-21-F Isopropylbenzene (Cumene) J poor field duplicate precision (57 RPD); result between SDL and SQL
T-21-F Naphthalene J result between SDL and SQL
T-21-F n-Butyl alcohol UJ low instrument response (low RRF), elevate SDL for NDs 3x (RV)
T-21-F Trichloroethene J result between SDL and SQL
T-21-F 2,4-Dinitrophenol UJ poor calibration fit (%RSD=31); Low ave MS/MSD recovery (58.5%)
T-21-F 2-Methylnaphthalene J poor field duplicate precision (74 RPD)
T-21-F 3,3'-Dichlorobenzidine UJ Low ave LCS/LCSD recovery (40.5%)
T-21-F 3-Nitroaniline UJ Low ave LCS/LCSD recovery (38.5%); Low ave MS/MSD recovery (55.5%)
T-21-F 4-Chloroaniline UJ Low ave LCS/LCSD recovery (26.5%); Low ave MS/MSD recovery (45%)

T-21-F Acenaphthylene J large difference between field duplicate pair (> 3 x MQL); result between SDL and SQL
T-21-F Aniline UJ Low ave LCS/LCSD recovery (45.5%)
T-21-F Benzaldehyde R Extremely low ave LCS/LCSD recovery (8.5%); Low ave MS/MSD recovery (9%); calibration drift (%D= -27)
T-21-F Benzidine UJ poor calibration fit (%RSD=39); calibration drift (%D= -24)
T-21-F Benzo(b)fluoranthene J result between SDL and SQL
T-21-F Benzo(g,h,i)perylene J result between SDL and SQL
T-21-F Benzo(k)fluoranthene J result between SDL and SQL
T-21-F Benzoic acid UJ calibration drift (%D= -21); Low ave MS/MSD recovery (51.5%)
T-21-F Biphenyl J result between SDL and SQL
T-21-F Chrysene J result between SDL and SQL
T-21-F Fluoranthene J result between SDL and SQL
T-21-F Indeno(1,2,3-cd)pyrene J result between SDL and SQL
T-21-F Pyrene J+ calibration drift (%D= 27)
T-21-F Pyridine UJ Low ave MS/MSD recovery (59%)
T-2-WEST Acrolein UJ low instrument response (low RRF), elevate SDL for NDs 13x (RV); Low ave MS/MSD recovery (13.5%)
T-2-WEST Isopropylbenzene (Cumene) J poor field duplicate precision (57 RPD)

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QUALIFIED DATA TABLE

Field Sample
Identification
Analyte Data
Qualifier Reason for Qualification
T-2-WEST n-Butyl alcohol UJ low instrument response (low RRF), elevate
SDL for NDs 1.4x
(RV)
T-2-WEST Vinyl acetate UJ calibration drift (%D= -27)
T-2-WEST 2,4-Dinitrophenol UJ poor calibration fit (%RSD=31); Low ave
MS/MSD recovery
(58.5%)
T-2-WEST 3,3'-Dichlorobenzidine UJ Low ave LCS/LCSD recovery (40.5%)
T-2-WEST 3-Nitroaniline UJ Low ave LCS/LCSD recovery (38.5%); Low ave
MS/MSD
recovery (55.5%)
T-2-WEST 4-Chloroaniline UJ Low ave LCS/LCSD recovery (26.5%); Low ave
MS/MSD
recovery (45%)
T-2-WEST Acenaphthylene UJ large difference between field duplicate pair
T-2-WEST Aniline UJ Low ave LCS/LCSD recovery (45.5%)
T-2-WEST Benzaldehyde R Extremely low ave LCS/LCSD recovery (8.5%); Low
ave
MS/MSD recovery (9%); calibration drift (%D= -27)
T-2-WEST Benzidine UJ poor calibration fit (%RSD=39); calibration drift
(%D= -24)
T-2-WEST Benzoic acid UJ calibration drift (%D= -21); Low ave MS/MSD
recovery (51.5%)
T-2-WEST Biphenyl J result between SDL and SQL
T-2-WEST Di-n-butyl phthalate J result between SDL and SQL
T-2-WEST Fluorene J result between SDL and SQL
T-2-WEST Phenanthrene J result between SDL and SQL
T-2-WEST Pyridine UJ Low ave MS/MSD recovery (59%)
T-6-EAST 2-Chloroethylvinyl ether UJ low instrument response (low RRF),
elevate SDL for NDs 210x
(RV)
T-6-EAST Acrolein UJ low instrument response (low RRF), elevate SDL for
NDs 50x
(RV); Low ave MS/MSD recovery (13.5%)
T-6-EAST Benzene J result between SDL and SQL
T-6-EAST Isopropylbenzene (Cumene) J poor field duplicate precision (57
RPD)
T-6-EAST n-Butyl alcohol UJ low instrument response (low RRF), elevate
SDL for NDs 3x (RV)
T-6-EAST Styrene J result between SDL and SQL
T-6-EAST Toluene J result between SDL and SQL
T-6-EAST 2,4-Dinitrophenol UJ poor calibration fit (%RSD=31); Low ave
MS/MSD
recovery (58.5%)
T-6-EAST 2-Methylnaphthalene J poor field duplicate precision (74 RPD)
T-6-EAST 3,3'-Dichlorobenzidine UJ Low ave LCS/LCSD recovery (40.5%)
T-6-EAST 3-Nitroaniline UJ Low ave LCS/LCSD recovery (38.5%); Low ave
MS/MSD
recovery (55.5%)

T-6-EAST 4-Chloroaniline UJ Low ave LCS/LCSD recovery (26.5%); Low ave MS/MSD recovery (45%)
T-6-EAST Acenaphthylene J large difference between field duplicate pair (> 3 x MQL)
T-6-EAST Aniline UJ Low ave LCS/LCSD recovery (45.5%)
T-6-EAST Anthracene J result between SDL and SQL
T-6-EAST Benzaldehyde R Extremely low ave LCS/LCSD recovery (8.5%); Low ave MS/MSD recovery (9%); calibration drift (%D= -27)
T-6-EAST Benzidine UJ poor calibration fit (%RSD=39); calibration drift (%D= -24)
T-6-EAST Benzoic acid UJ calibration drift (%D= -21); Low ave MS/MSD recovery (51.5%)
T-6-EAST Biphenyl J result between SDL and SQL
T-6-EAST Fluoranthene J result between SDL and SQL
T-6-EAST m,p-Cresol J result between SDL and SQL
T-6-EAST o-Cresol J result between SDL and SQL
T-6-EAST Pyrene J calibration drift (%D= 27); result between SDL and SQL
T-6-EAST Pyridine UJ Low ave MS/MSD recovery (59%)
T-6-FLOOR 2-Chloroethylvinyl ether UJ low instrument response (low RRF), elevate SDL for NDs 210x
(RV)
T-6-FLOOR Acrolein UJ low instrument response (low RRF), elevate SDL for NDs 50x
(RV); Low ave MS/MSD recovery (13.5%)

QUALIFIED DATA TABLE

Field Sample
Identification
Analyte Data
Qualifier Reason for Qualification
T-6-FLOOR Isopropylbenzene (Cumene) J poor field duplicate precision (57 RPD)
T-6-FLOOR n-Butyl alcohol UJ low instrument response (low RRF), elevate SDL for NDs 3x (RV)
T-6-FLOOR tert-Butyl methyl ether (MTBE)
J result between SDL and SQL
T-6-FLOOR 2,4-Dinitrophenol UJ poor calibration fit (%RSD=31); Low ave MS/MSD recovery (58.5%)
T-6-FLOOR 3,3'-Dichlorobenzidine UJ Low ave LCS/LCSD recovery (40.5%)
T-6-FLOOR 3-Nitroaniline UJ Low ave LCS/LCSD recovery (38.5%); Low ave MS/MSD recovery (55.5%)
T-6-FLOOR 4-Chloroaniline UJ Low ave LCS/LCSD recovery (26.5%); Low ave MS/MSD recovery (45%)
T-6-FLOOR Acenaphthylene UJ large difference between field duplicate pair (> 3 x MQL)
T-6-FLOOR Acetophenone J result between SDL and SQL
T-6-FLOOR Aniline UJ Low ave LCS/LCSD recovery (45.5%)
T-6-FLOOR Benzaldehyde R Extremely low ave LCS/LCSD recovery (8.5%); Low ave MS/MSD recovery (9%); calibration drift (%D= -27)
T-6-FLOOR Benzidine UJ poor calibration fit (%RSD=39); calibration drift (%D= -24)
T-6-FLOOR Benzoic acid UJ calibration drift (%D= -21); Low ave MS/MSD recovery (51.5%)
T-6-FLOOR Di-n-butyl phthalate J result between SDL and SQL
T-6-FLOOR Pyridine UJ Low ave MS/MSD recovery (59%)
T-6-NORTH 1,1,1-Trichloroethane J result between SDL and SQL
T-6-NORTH 1,2,4-Trimethylbenzene J result between SDL and SQL
T-6-NORTH 1,3,5-Trimethylbenzene J result between SDL and SQL
T-6-NORTH 2-Chloroethylvinyl ether UJ low instrument response (low RRF), elevate SDL for NDs 210x (RV)
T-6-NORTH Acrolein UJ low instrument response (low RRF), elevate SDL for NDs 50x (RV); Low ave MS/MSD recovery (13.5%)
T-6-NORTH Cyclohexane J result between SDL and SQL
T-6-NORTH Isopropylbenzene (Cumene) J poor field duplicate precision (57 RPD); result between SDL and SQL
T-6-NORTH n-Butyl alcohol UJ low instrument response (low RRF), elevate SDL for NDs 3x (RV)
T-6-NORTH n-Propylbenzene J result between SDL and SQL
T-6-NORTH Toluene J result between SDL and SQL
T-6-NORTH Trichloroethene J result between SDL and SQL
T-6-NORTH 2,4-Dinitrophenol UJ poor calibration fit (%RSD=31); Low ave MS/MSD recovery

(58.5%)
T-6-NORTH 3,3'-Dichlorobenzidine UJ Low ave LCS/LCSD recovery (40.5%)
T-6-NORTH 3-Nitroaniline UJ Low ave LCS/LCSD recovery (38.5%); Low ave
MS/MSD
recovery (55.5%)
T-6-NORTH 4-Chloroaniline UJ Low ave LCS/LCSD recovery (26.5%); Low ave
MS/MSD
recovery (45%)
T-6-NORTH Acenaphthylene J large difference between field duplicate pair
(> 3 x MQL); result
between SDL and SQL
T-6-NORTH Aniline UJ Low ave LCS/LCSD recovery (45.5%)
T-6-NORTH Benzaldehyde R Extremely low ave LCS/LCSD recovery (8.5%); Low
ave
MS/MSD recovery (9%); calibration drift (%D= -27)
T-6-NORTH Benzidine UJ poor calibration fit (%RSD=39); calibration drift
(%D= -24)
T-6-NORTH Benzo(g,h,i)perylene J result between SDL and SQL
T-6-NORTH Benzoic acid UJ calibration drift (%D= -21); Low ave MS/MSD
recovery (51.5%)
T-6-NORTH Chrysene J result between SDL and SQL
T-6-NORTH Diethyl phthalate J result between SDL and SQL
T-6-NORTH Fluoranthene J result between SDL and SQL
T-6-NORTH Phenanthrene J result between SDL and SQL
T-6-NORTH Phenol J result between SDL and SQL
T-6-NORTH Pyridine UJ Low ave MS/MSD recovery (59%)

QUALIFIED DATA TABLE

Field Sample
Identification
Analyte Data
Qualifier Reason for Qualification
T-6-SOUTH 2-Chloroethylvinyl ether UJ low instrument response (low RRF),
elevate SDL for NDs 210x
(RV)
T-6-SOUTH Acrolein UJ low instrument response (low RRF), elevate SDL for
NDs 50x
(RV); Low ave MS/MSD recovery (13.5%)
T-6-SOUTH Benzene J result between SDL and SQL
T-6-SOUTH Chloroform J result between SDL and SQL
T-6-SOUTH Isopropylbenzene (Cumene) J poor field duplicate precision (57
RPD)
T-6-SOUTH Naphthalene J result between SDL and SQL
T-6-SOUTH n-Butyl alcohol UJ low instrument response (low RRF), elevate
SDL for NDs 3x (RV)
T-6-SOUTH Styrene J result between SDL and SQL
T-6-SOUTH Toluene J result between SDL and SQL
T-6-SOUTH Xylene (total) J result between SDL and SQL
T-6-SOUTH 2,4-Dinitrophenol UJ poor calibration fit (%RSD=31); Low ave
MS/MSD recovery
(58.5%)
T-6-SOUTH 2-Methylnaphthalene J poor field duplicate precision (74 RPD)
T-6-SOUTH 3,3'-Dichlorobenzidine UJ Low ave LCS/LCSD recovery (40.5%)
T-6-SOUTH 3-Nitroaniline UJ Low ave LCS/LCSD recovery (38.5%); Low ave
MS/MSD
recovery (55.5%)
T-6-SOUTH 4-Chloroaniline UJ Low ave LCS/LCSD recovery (26.5%); Low ave
MS/MSD
recovery (45%)
T-6-SOUTH Acenaphthene J result between SDL and SQL
T-6-SOUTH Acenaphthylene J large difference between field duplicate pair
between SDL and SQL
T-6-SOUTH Aniline UJ Low ave LCS/LCSD recovery (45.5%)
T-6-SOUTH Benzaldehyde R Extremely low ave LCS/LCSD recovery (8.5%); Low
ave
MS/MSD recovery (9%); calibration drift (%D= -27)
T-6-SOUTH Benzidine UJ poor calibration fit (%RSD=39); calibration drift
(%D= -24)
T-6-SOUTH Benzoic acid UJ calibration drift (%D= -21); Low ave MS/MSD
recovery (51.5%)
T-6-SOUTH Biphenyl J result between SDL and SQL
T-6-SOUTH Di-n-butyl phthalate J result between SDL and SQL
T-6-SOUTH Fluoranthene J result between SDL and SQL
T-6-SOUTH m,p-Cresol J result between SDL and SQL
T-6-SOUTH o-Cresol J result between SDL and SQL
T-6-SOUTH Pyridine UJ Low ave MS/MSD recovery (59%)

ATTACHMENT

1

Sample_ID Lab_Sample_ID Test_type
_code
Analytical
Method
Total_or_dissolved
Matrix Parameter Valid_qualifier Result_type
_code
Prep_date Prep_time Analysis
Date
Analysis
Time
QC_comment QC_Batch
x a8914 ICAL2 SW8260B n-Butyl alcohol J / UJ to RRs/NDs TRG 1/14/2011
11:41 low instrument response (low
RRF), elevate SDL for NDs 3x
(TR)
x a8933 ICAL1 SW8260B Acrolein J / UJ to RRs/NDs TRG 11/14/2011 11:09 low
instrument response (low
RRF), elevate SDL for NDs 50x
(TR)
x a8933 ICAL1 SW8260B 2-Chloroethyl vinyl ether J / UJ to RRs/NDs TRG
11/14/2011 11:09 low instrument response (low
RRF), elevate SDL for NDs 210x
(TR)
x k9746 ICAL2 SW8260B n-Butyl alcohol J / UJ to RRs/NDs TRG 1/7/2011
11:14 low instrument response (low
RRF), elevate SDL for NDs 1.4x
(TR)
x k9758 ICAL1 SW8260B Acrolein J / UJ to RRs/NDs TRG 1/7/2011 18:08 low
instrument response (low
RRF), elevate SDL for NDs 13x
(TR)
x a8960 CCV1 SW8260B Acrolein J+ to RRs (none) VOC 1/16/2011 9:23
calibration drift (%D= 24)
x a8960 CCV1 SW8260B 2-Hexanone J+ to RRs (none) VOC 1/16/2011 9:23
calibration drift (%D= 21)
x k9905 CCV1 SW8260B Vinyl acetate J- / UJ to RRs/NDs VOC 1/18/2011 13:19
calibration drift (%D= -27)
T-15-F MSD 21101140503 MSD SW8260B S Acrolein J- / UJ to RRs/NDs TRG
1/16/2011 14:25 Low ave MS/MSD recovery
(13.5%)
449013
T-15-F MSD 21101140503 MSD SW8260B S Acrolein J to RRs (none) TRG
1/16/2011 14:25 poor MS/MSD precision (80
RPD)
449013
T-15-F MSD 21101140503 MSD SW8260B S Chloroethane J to RRs (none) TRG
1/16/2011 14:25 poor MS/MSD precision (42
RPD)
449013
BLIND DUP 21101140511 FLDDUP SW8260B S Isopropylbenzene

(Cumene)
J to RRs TRG 1/16/2011 19:46 poor field duplicate precision (57
RPD)
449013
x e7897 ICAL1 SW8270C 2,4-Dinitrophenol J / UJ to RRs/NDs TRG 1/12/2011
8:21 poor calibration fit (%RSD=31)
x e7897 ICAL1 SW8270C Benzidine J / UJ to RRs/NDs TRG 1/12/2011 8:21 poor
calibration fit (%RSD=39)
x e7972 CCV1 SW8270C Benzoic acid J- / UJ to RRs/NDs SVOC 1/14/2011 14:42
calibration drift (%D= -21)
x e7972 CCV1 SW8270C Hexachlorocyclopentadiene J+ to RRs (none) SVOC
1/14/2011 14:42 calibration drift (%D= 24)
x e7972 CCV1 SW8270C Benzidine J- / UJ to RRs/NDs SVOC 1/14/2011 14:42
calibration drift (%D= -24)
x e8008 CCV1 SW8270C Hexachlorocyclopentadiene J+ to RRs (none) SVOC
1/17/2011 8:28 calibration drift (%D= 25)
x e8008 CCV1 SW8270C Benzidine J- / UJ to RRs/NDs SVOC 1/17/2011 8:28
calibration drift (%D= -44)

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ATTACHMENT

1

Sample_ID Lab_Sample_ID Test_type
_code
Analytical
Method
Total_or_dissolved
Matrix Parameter Valid_qualifier Result_type
_code
Prep_date Prep_time Analysis
Date
Analysis
Time
QC_comment QC_Batch
x e8008 CCV1 SW8270C Pyrene J+ to RRs SVOC 1/17/2011 8:28 calibration drift (%D= 27)
x e8008 CCV1 SW8270C Benzaldehyde J- / UJ to RRs/NDs SVOC 1/17/2011 8:28 calibration drift (%D= -27)
LCSD for HBN
448916 [EXTO/2751
912492 LCSD SW8270C S 3,3'-Dichlorobenzidine J- / UJ to RRs/NDs TRG 1/14/2011 10:30 1/14/2011 16:39 Low ave LCS/LCSD recovery (40.5%)
448983
LCSD for HBN
448916 [EXTO/2751
912492 LCSD SW8270C S 3-Nitroaniline J- / UJ to RRs/NDs TRG 1/14/2011 10:30 1/14/2011 16:39 Low ave LCS/LCSD recovery (38.5%)
448983
LCSD for HBN
448916 [EXTO/2751
912492 LCSD SW8270C S 4-Chloroaniline J- / UJ to RRs/NDs TRG 1/14/2011 10:30 1/14/2011 16:39 Low ave LCS/LCSD recovery (26.5%)
448983
LCSD for HBN
448916 [EXTO/2751
912492 LCSD SW8270C S Aniline J- / UJ to RRs/NDs TRG 1/14/2011 10:30 1/14/2011 16:39 Low ave LCS/LCSD recovery (45.5%)
448983
LCSD for HBN
448916 [EXTO/2751
912492 LCSD SW8270C S Benzaldehyde J- / R to RRs/NDs TRG 1/14/2011 10:30 1/14/2011 16:39 Extremely low ave LCS/LCSD recovery (8.5%)
448983
T-15-F MSD 21101140503 MSD SW8270C S 2,4-Dinitrophenol J- / UJ to RRs/NDs TRG 1/14/2011 10:30 1/14/2011 17:29 Low ave MS/MSD recovery (58.5%)
448983

T-15-F MSD 21101140503 MSD SW8270C S 3-Nitroaniline J- / UJ to RRs/NDs
TRG 1/14/2011 10:30 1/14/2011 17:29 Low ave MS/MSD recovery
(55.5%)
448983

T-15-F MSD 21101140503 MSD SW8270C S 4-Chloroaniline J- / UJ to RRs/NDs
TRG 1/14/2011 10:30 1/14/2011 17:29 Low ave MS/MSD recovery
(45%)
448983

T-15-F MSD 21101140503 MSD SW8270C S Benzaldehyde J- / UJ to RRs/NDs TRG
1/14/2011 10:30 1/14/2011 17:29 Low ave MS/MSD recovery
(9%)
448983

T-15-F MSD 21101140503 MSD SW8270C S Benzoic acid J- / UJ to RRs/NDs TRG
1/14/2011 10:30 1/14/2011 17:29 Low ave MS/MSD recovery
(51.5%)
448983

T-15-F MSD 21101140503 MSD SW8270C S Pyridine J- / UJ to RRs/NDs TRG
1/14/2011 10:30 1/14/2011 17:29 Low ave MS/MSD recovery
(59%)
448983

LCSD for HBN
448916 [EXTO/2751
912492 LCSD SW8270C S Aniline J to RRs (none) TRG 1/14/2011 10:30
1/14/2011 16:39 poor LCS/LCSD precision (62
RPD)
448983

T-21-F 21101140504 SMP SW8270C S 2-Fluorobiphenyl none (surrogate diluted
out)
SUR 1/14/2011 10:30 1/17/2011 8:56 extremely low SU recovery (0%) 449083

T-21-F 21101140504 SMP SW8270C S 2-Fluorophenol none (surrogate diluted
out)
SUR 1/14/2011 10:30 1/17/2011 8:56 extremely low SU recovery (0%) 449083

T-21-F 21101140504 SMP SW8270C S Terphenyl-d14 none (surrogate diluted
out)
SUR 1/14/2011 10:30 1/17/2011 8:56 extremely low SU recovery (0%) 449083

T-21-F 21101140504 SMP SW8270C S Nitrobenzene-d5 none (surrogate diluted
out)
SUR 1/14/2011 10:30 1/17/2011 8:56 extremely low SU recovery (0%) 449083

T-21-F 21101140504 SMP SW8270C S 2,4,6-Tribromophenol none (surrogate
diluted
out)
SUR 1/14/2011 10:30 1/17/2011 8:56 extremely low SU recovery (0%) 449083

ATTACHMENT

1

Sample_ID Lab_Sample_ID Test_type
_code
Analytical
Method
Total_or_
dissolved
Matrix Parameter Valid_qualifier Result_type
_code
Prep_date Prep_time Analysis
Date
Analysis
Time
QC_comment QC_
Batch
T-21-F 21101140504 SMP SW8270C S Phenol-d5 none (surrogate diluted
out)
SUR 1/14/2011 10:30 1/17/2011 8:56 extremely low SU recovery (0%) 449083
SC-E 21101140513 SMP SW8270C S 2,4,6-Tribromophenol none (only one of
multiple
surrogates deficient)
SUR 1/14/2011 10:30 1/14/2011 20:16 low SU recovery (59%) 448983
EQUIPMENT
BLANK
21101140514 EQBK SW8270C W Phenol-d5 none (only one of multiple
surrogates deficient)
SUR 1/14/2011 11:35 1/14/2011 15:49 low SU recovery (41%) 448983
BLIND DUP 21101140511 FLDDUP SW8270C S 2-Methylnaphthalene J to RRs TRG
1/14/2011 10:30 1/14/2011 19:43 poor field duplicate precision (74
RPD)
448983
BLIND DUP 21101140511 FLDDUP SW8270C S Acenaphthylene J / UJ to RRs/NDS
TRG 1/14/2011 10:30 1/14/2011 19:43 large difference between field
duplicate pair (> 3 x MQL)
448983

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